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CALIFORNIA ENERGY COMMISSION

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P R O C E E D I N G S

9:44 a.m.

COMMISSIONER BOYD: Good morning, everybody. Excuse the slight delay while they worked out technical electronic issues and what have you and got rid of feedback they were getting in their system, etc.

Good morning, welcome, and thank you for your attendance and for many of you, your participation in this Transportation Committee Workshop on the subject of Competition in California's Petroleum Industry.

I will apologize in advance if I start losing my voice for the cold that I am carrying around.

The genesis of this meeting or maybe the plural that word perhaps many, but I like to focus in on price volatility as one of the major concerns that keeps bringing many of us together and stays in the headlines here in California for several years now.

It is an extreme concern to the citizens of this state. It is a problem to them, but a bigger problem collectively to our economy. It remains a concern of this Commission and I guess of governmental and legislative bodies certainly in this state, if not more universally now.

The real genesis to me of the issue we are struggling with today goes all the back to the day '99 and 2000 and the very significant price spike that occurred at that point in time that really got people going again.

It touched off a lot of activity. Investigations by state agencies and the State Attorney General, legislative directions ultimately to this agency and to others, the Air Resource Board most specifically with us to explore strategies and alternatives and the issue in general, i.e. the idea of the State sanctioned if not sponsored pipeline from the Gulf, the State sanctioned if not administered strategic fuels reserve, and of course the request that this agency and the Air Resources Board explore how to reduce our dependence on petroleum, an multiple legislative hearings at which I have seen I bet you every one in this room at which many of us have participated.

The dilemma is the issue continues. I don't think Commissioner Pfannenstiel and I, who are the Transportation Committee, were quite realized that by the time we got this workshop scheduled and finally held would be such a propitious moment in history again with regard to price volatility and price spiking.

I woke up this morning to headlines in the Sacramento Bee about gas prices soaring and lots of comments in the national media about the dilemma that we face.

In the middle of all this while this agency and this nation, State of California continue to worry about national energy policy, sometimes wishing we were a nation could set a national energy policy. We have to deal with the energy policy of the country, and this is a non-partisan statement I am making hasn't been one as far as I am concerned for decades.

I remember President Nixon saying we needed to reduce our dependence on foreign oil and every president since then, regardless of party, and frankly I still look for a cohesive national energy policy, and it is very important for the nation, State of California, the world's fifth, sometimes sixth, depending on the value of the dollar and the ambition of France, the largest economy needs to reckon with the cost of energy and the energy supply and the energy diversity, and the energy security, and needs to keep dealing with this issue.

The Energy Commission during all this process engaged the University of California and the California Energy Institute of the University to take a look at this subject, study the issue of possible market power in California's petroleum system. Their Director, Severin Borenstein, and his crew did produce a report which they presented to us and that report titled "Market Power in California's Gasoline Market" they submitted that to us, and we discussed that with them at length a little earlier this year.

I remember Severin and I before one of the many legislative committees in which that issue was discussed yet again, however frankly, we found the report and Severin's presentation of that subject here at the Energy Commission to be enlightening, thought provoking, and frankly one of the reasons we are holding this workshop today is to allow Severin another opportunity to present his thoughts on this topic to a larger audience to get the reaction from many of you to this whole general subject.

We continue to be interested in exploring this topic of market competition, and we want to explore it a little more broadly than what the Energy Institute did in its report. They did what we asked them to do, but we've heard concerns, perhaps even experienced concerns from various industry stakeholders on competition in broader areas, such as in the general area of just importing petroleum product in pipeline operations and just in general retail marketing and distribution of both gasoline and diesel fuel. So, we would like to put those areas of California's petroleum market on the table for discussion today and in the immediate future.

The primary reason we are holding this workshop is so we, the Energy Commission, can gain a better awareness and understanding of this issue and these issues and competition frankly in our petroleum industry and how it may relate to energy planning and public policy.

As you know, we are responsible to the governor and the legislature for producing an Integrated Energy Policy Report. The legislature in its infinite wisdom, I think, requested that such a report be prepared starting in 2003, a major redo every other year, and in the intervening years, commissioned us to pursue some of the individual issues that we identify that need further exploration.

So, we basically have a full time, real time, dynamic planning process that allows us to keep our eye on the ball so to speak or on the subject of energy in general to look at all three legs of the energy stool that I like to refer to upon which I think our economy in this state sits, i.e. electricity, natural gas, and transportation fuel, which is right now basically petroleum.

Of course a major concern, and I would like to say all three legs of that stool have been shaky and remain that way in our state, thus we worry about the economy.

When markets are lacking sufficient degree of competition, we get concerned, and we know that the prices to consumers can be higher than otherwise might be or should be, so we strive to develop energy policies that would hopefully facilitate and promote competition in the marketplace rather than hinder competition. Certainly we will want to hear if government at least in California is in the way of any of this so that we can address that.

We need to be mindful of how market power could operate or could emerge in the petroleum market as we do all of our work here at the Energy Commission in the area of energy in general.

So, let me also, though, address what the workshop is not. I have already made reference to and everybody is aware of the numerous investigations and hearings that have occurred in this state, and even at the federal level over the past few years on the issues of market competition in the petroleum market, but this not a hearing or an investigation. It truly is a workshop. Hopefully, a fairly informal one in spite of the rigid formality of the way this room is designed and set up. We will try to break that down soon when we get our panel up here at the table.

We don't expect everybody to agree with each other, but we really would like an open and frank and honest discussion of the issues, so we can address what really ails us and not get engaged in unnecessary allegations that are dramatic but not frankly to the point. So, we look forward to a very open and hopefully honest and forthright discussion of the issues so that we can do our job and address the issues.

We have a pretty good-sized agenda. We have a fairly tight schedule in that agenda in order to get everybody heard. So I am going to ask folks to limit questions to clarification or maybe a little bit of what the speaker said when we get the panel up here and hear from them.

Then later on this afternoon, we will have time for a general public go around and public comments and questions.

The staff has already prepared a list of questions that have been posed to the workshop participants to elicit some early response. We had hoped that those would be helpful to us in relating to the subject of competition in the petroleum industry.

As I say at the end of the day, we have time on the agenda for folks who want to ask questions. We have openly solicited some people to be here to ask questions or make their points. We ask them to wait for that period of time.

Now, looking at Brian. Do we have blue cards on the back table, so the custom for those of you who are used to the Energy Commission, when we get to the public session, is to ask folks to fill out a little blue card which you will find out on the table in the lobby that will find its way up here to us and allow us to know who to call upon for public testimony.

If you would, when we get to public testimony, you want to say something, fill out a little blue card, and we will see that it gets up here.

With that, I would like to turn to my associate member, Commissioner Pfannenstiel and ask her if she would like to make any remarks.

COMMISSIONER PFANNENSTIEL: Thank you, Jim. I would like to join Jim in welcoming you and thanking you for participating.

Before I have any opening comments, I have a favor to ask. Would everybody take out your cell phone. I know that there are more than a couple of cell phones. Now, would you either turn them off or put them on vibrate. Thank you.

From my perspective, what we are here about today is really trying to understand really fundamentally the causes of the high prices in California and nationwide, primarily in

California.

They are high, they are volatile. There are reasons that people have postulated. Some people say it is simply the question of supply and demand balance. Others would say that it is much more complicated. That is has to do with the functioning of the petroleum industry and the structure of that industry.

This Commission recognizes that the petroleum infrastructure in California has not been increasing even as demand has been growing, and we are looking at policies. We are trying to develop wise policies to deal with that mismatch.

Those policies, though, need to be formed by the many stakeholders in this industry. We have invited here today a number of stakeholders, and we did so knowing that different stakeholders are likely to have different perspectives on the functioning of the petroleum market and the market structure, and that you are apt to arrive at different conclusions about how to fix the problem.

What we want to look at today isn't really just the problems. I think that we are all painfully aware of the problems, the result of what is happening now. What we are looking for is some commonality, and specifically commonality around policy initiatives that we should be thinking about.

We have invited a number of experts, and we did so because we want to be informed by what you know.

Now many of you may know that my background is in the electric industry, and the Energy Institute Report certainly raises some interesting and I think really valid parallels between the petroleum industry and the electric industry.

I do think that most of us are aware that you can't push those parallels and similarities too far when it comes to policy. There are as many differences and maybe more than there are similarities.

What we have today is a distinguished panel, and I am looking forward to hearing from them. Without further comment, I turn it back to Commissioner Boyd.

COMMISSIONER BOYD: Thank you, Commissioner Pfannenstiel.

I guess now we are going to turn to the

agenda and hear a series of presentations, of course, to be led off by Dr. Borenstein who was the author of this report. I have my well-weathered, very weathered, copy still, a dog-eared copy with me. You all have the agenda, I trust, and I hope. Let me just mention that Mr. Leto referenced down here is not going to be here today, so we had to eliminate one of the presentations. He had a very last minute situation arise, and so we will not get his presentation on pipeline and supply demographics.

By the same token, I am sure we will hear from other people on that subject. While one of the panelists we hoped to have attend today, Drew Laughlin, was not able to be here, Drew is going to join us on the phone later this afternoon when we have the panel discussion. I know Drew has some insights on the pipeline business. So, we still hope to cover that subject as well.

With that, I would like to turn it over to Dr. Borenstein. Severin, welcome and thank you for being here.

DR. BORENSTEIN: Thank you. Good morning, Commissioner Boyd and Commissioner Pfannenstiel and audience.

I am Severin Borenstein. I am Director of the UC Energy Institute. The UC Energy Institute is a non-partisan party analysis and energy research organization that supports energy research throughout the UC system.

The work I am going to talk about today is available on the CEC website as a working paper under the same name here. It is also available on the UCI website, www.ucei.org, as a CSEM, Center for the Study of Energy Markets, working paper No. 132.

What I am going to talk about today is primarily the wholesale gasoline market. I am really not going to talk much about the oil market or much about the retail end of the gasoline market. We are in fact currently engaged in another research project at the behest of the CEC on the retail end of the market.

Let me just briefly start by talking about the oil market, which certainly is a major driver of gasoline prices. Every dollar per barrel increase in the price of oil translate fairly quickly to 2 1/2 cents a gallon at the pump.

Oil prices are not only very high right

now, as everybody is aware, but I think probably more importantly for long run policy, the long run price of oil has shifted dramatically in the last year.

In the futures market, the six year out price of oil which has been quite stable for many years between $18 and $24 is currently around $36 or $35 per barrel. So, there really has been a dramatic shift in the price of oil, and one that the markets at least seem to be saying is likely to be with us a very long time.

The next time the futures markets are saying that the price of oil will be below $40 a barrel is 2007. So, at least the market's guess, which is the composite of a lot of people's guesses put together, and I think it is probably better than any one expert's opinion, seem to think that oil prices are going to stay high for quite a while.

That said, California has an additional problem beyond the price of oil, and that is the cost difference between the price of oil, which tends to be very similar everywhere in the world and the price of gasoline, which is much higher in California than anywhere else in the world or anywhere else in the country.

A lot of people attribute this to basic scarcity as Commissioner Pfannenstiel said and that essentially, this is supply and demand. We get into a situation where supply is tight and the price goes up. We actually have seen this, and this is certainly a component of it.

The way the refining industry works, over a wide range of production levels, they simply are taking oil and turning it into refined product. For over a wide range of production levels, they don't face much of a capacity constraint.

In fact, for the last 25 years prior to the last five years or so, the industry was characterized by over capacity and very low margins, and if you had been studying this industry for the previous 25 years prior to 2000 or so, the industry lore was you can never make money in the refining business. The margins are lousy, it is a dog industry, and all you do is lose money. That, essentially, was a response to the fact that there was a lot of capacity and margins as a result were very low.

What has happened recently in

California, and is starting to happen in the rest of the country as well, is that demand has continued to expand while supply really hasn't kept up. California is leading the country, as we do in so many thing, unfortunately this is one of the ones we would rather not be leading the country in, in chewing up the excess capacity in the industry so that we are now at a point where the state has gone from having significantly more production capacity than demand in the state in 1996 and '97 when we first started using this different blend of gasoline to actually not being able to supply the state's gasoline needs in significant parts of the year.

Scarcity is a clear part of what has been going on, scarcely at the refining level, it is a clear part of what has been going on in the industry. And scarcity in the refining level is naturally going to lead to higher prices.

Without any company operating in any way other than completely competitive, taking prices as given and just producing all they can so long as their cost of production still allow them some margin, you would see a price increase when you start to get this sort of scarcity in the market.

This is a representation of that. We have gone from the lower demand curve most of the time where the supply curve is relatively flat, so the shifts in demand cause fairly small shifts in the price to the D 2, the higher demand curve which is intersecting supply on a portion where there really isn't much extra room in the industry at this point.

As a result, we see that relatively small shifts in supply or demand can cause very large price fluctuations.

This was actually the situation in May and April this year, and it was clear we were in for a very tight summer. We actually got lucky this summer, we didn't have any major refinery outages.

Given that we were in the D 2 situation, had we had a shift in supply, we would have seen really massive increase in price I believe. I think we just got lucky and didn't see that happen.

While scarcity is clearly a part of the story, it is not the whole story. As much as supply and demand is basic economics, so is market power. That is the ability of firms to affect a price in the market.

The refiners solve complex optimization problems about how much oil to put through the refinery and what to produce from it, changing their mix. They have some flexibility in trading off the mix, and they have a flexibility in how much oil to run through.

When they think about that, what they are trying to do is maximize their profits, that is what a company should be doing in a deregulated market. When they do that, they look at their production costs, they look at the cost of oil, they look at the price of the outputs. One of the things a company has to consider, if they are being responsible, is what their production is going to do to the market. Not just responding to the market, but realizing in some cases they will affect the market.

That is the definition of market power in economics. The fact that your production is going to move the price in the market. I think it is without question that the production of some of these companies, pretty much all of the major producers of California gasoline, affects the price in the market.

We've seen that because outages clearly drive -- a single refinery clearly drive the price up. Once you recognize that fact, that changes in production are going to affect the price in the market, you have to recognize that responsible firms simply out to maximize profits, are going to take that into account.

What that means is when they think about well, how much should we spend to get this unit that went down for some reason up quickly, how much is it worth to us. They think about well, if they produce that extra gasoline, how much more would they make. They would also think about if we don't produce that extra gasoline, how much would the price go up. That's just got to be part of the calculation. It's a natural part of it.

There is, by the way, nothing illegal in that behavior under US Anti-Trust Laws. In fact, unilateral exercise of market power, the simple recognition that prices are affected by my output, is I would argue as natural a part of the economics of markets as supply and demand are.

In the California gasoline market, there are a number of large producers with Chevron. This is a graph of the capacity shares of production in the California market. This is actually the through-put shares, not the gasoline production shares, which are not publicly available. Approximate the through-put shares to a great extent, and it is clear that these larger producers in the market are able to affect price. That is when they produce more by any significant amount relative to their total production, it is going to drive the price in the market.

Now these are not the only players in the market for California CARB gasoline, but they are the major producers, and certainly the larger ones here recognize and probably even the ones down to Tesoro and Exxon Mobile, recognize that their production decisions drive price.

The more benign way of saying that is they recognize that if they put more product on the market, that is going to drive the price down. The more inflammatory way of saying it is they recognize that if they take product off the market, it is going to drive the price up. You are making the statement either way, that is, that firms are going to have some degree of market power.

Will they exercise it? I would actually

frankly be shocked if they didn't exercise it in the sense that when making these complex dynamic optimization decisions, they took into account the fact that their production decisions are going to affect price, and that will give them an incentive to produce less than they otherwise would.

How great is that affect? That depends on a couple of things. The ability of a firm to exercise market power depends on how much its production is going to drive price.

That has two components to it. One is how much does price change the demand in the market. Consumers, for instance, are very sensitive to the price of the product. If you try to produce less and drive the price up, it won't drive the price up very much, it will just cut your sales a lot because as soon as you start driving prices up, consumers will buy a whole lot less. That is called demand elasticity.

That constrains the ability of firms to exercise market power because if consumers are going to respond quickly and not buy very much, you can't make much more money by producing less.

The other potential constraint in the market is on the supply side. If I am one of the producers, my ability to exercise market power, controlling for what demanders will do, depends on what the other suppliers will do.

If I am in a situation where when I cut back, there are some other producer who can immediately replace that supply because they have plenty of excess capacity. That is really going to constrain my ability to exercise market power.

On the other hand, if I am in a situation where the whole market is very constrained, is at its capacity for production, then I will know that when I produce a little less, the other producers will be in a much weaker position to actually take advantage of the higher resulting prices by producing more, which then drives the prices back down again. They won't be able to do that because they don't have any more capacity to utilize at the extreme.

The real question here is what is the net effect here, and unfortunately as we say in the report, we don't have estimates of this. We don't have an estimate of how much of these margins in the California market are market power and how much are to scarcity. We argue in the paper that it is actually extremely difficult to diagnose short run market power certainly. That is to essentially second guess the refiners and say boy, we know you are producing this much, but we think you could have squeezed a little more out of this refinery and it still would have made sense economically, but for the fact that you were trying to crank up prices.

Refining is very different from for instance the electricity industry. It is different in a number of ways as Commissioner Pfannenstiel referred to. One of the ways is the production process is much more complex, and as a result, it is much more difficult to tell whether a producer -- I almost said generator, because in the electricity industry, that is what we are talking about -- is actually producing all they can economically.

Producers of gasoline in California are not only making marginal decisions of how much oil to run through the refinery, but also how much gasoline versus other products to produce from it.

It is a very complex process, and I think realistically, the regulator would have very little chance of helpfully second guessing the process.

Actually before I move on to talk about storage, let me just make one other point. When we think about supply response, we can think about those other producers in this market and how close they are to capacity and so forth. In the very very short run, that is probably all there is.

In the slightly longer run, there's more room for supply response, and that is from other refineries outside California that can make CARB gasoline. There are a few of them, but there are actually only a few of them that are really ready to make CARB gasoline. With some lag for delivery, a couple of weeks, they can produce more CARB gasoline if the margins are high enough.

As you go to a longer time period, months, there are other refineries that can make adjustments in their refining process to at least squeeze out some CARB gasoline. As you go to a still longer perhaps months, maybe into the years now, there are refineries that can retro-fit in order to be ready to produce quite a significant quantity.

One of the pieces of good news that has come out of our price spikes in California are margin spikes I am going to call them to distinguish from the higher oil prices that are a significant part of our high prices, is that there has been some response from outside the state.

I know of one example because I got called by a reporter from Washington state who was doing a story in which he was quite upset, people were upset that a refinery in Washington state was retro-fitting to produce CARB gasoline. Their concern was this was going to reduce the supply of gasoline in Washington state. As a result, it might drive up Washington state gasoline prices to which I said that is right. That is how markets work. If there are higher margins selling your product somewhere else, markets respond, and they try to sell their products elsewhere.

California is experiencing much higher margins, and I will try to explain why I think those are probably permanently higher margins, than we had over the previous eight years going up to 2003. That is inducing some other refiners in other locations to retro-fit to produce CARB gasoline. That is good news. It is not a complete solution to the problem, but I think it will have some effect.

When we think about this sort of market

power problem, we have to recognize that while it is the case, as I said it is very difficult for a regulator to second guess production decisions, I think it is also very difficult for the industry to argue that it is clear that they are not exercising market power. First of all, it is sort of anti-economic, and if a firm actually claimed that, you would wonder why their CEO is not recognizing the fact that their production affects price.

Secondly, in a market with that sort of supply curve that I showed -- I am not sure how to go backwards here. In a market like this, if you are in the D 2 position, it doesn't take much restriction of output to drive prices through the roof.

By the same token, it would be extremely difficult to diagnose whether a firm was doing that because you would not see huge changes in the production of a firm, you would see very small changes. I think second guessing those sorts of changes is even more challenging and less likely to result in a firm case one way or the other on market power.

Having said that, let me discuss a

couple of issues that sort affect this whole analysis. The first one is of course storage. One of the ways in which electricity is very different from gasoline is that gasoline is storable.

Storage helps to reduce the scarcity in a market and the market power impact of transitory supply/demand mismatches. For instance, as we all know, every spring the industry builds up stocks of gasoline because they don't have the capacity in the summer, and everybody knows the summer is going to be a heavy driving season, to meet that demand.

Unlike the electricity market, where you get huge price spikes and you should because you are getting real time shortages, in the gasoline market you can relieve that to some extent by building up stocks in advance.

There's a limit to how much you can do that way. One is the limit of storage, and the other is the cost of storage. That is the storage has to make enough money, essentially, off the high price/low price arbitrage to make it worth to maintain and build storage.

You won't perfectly off set these price

variations, but storage would certainly limit the degree to which prices will spike when demand in a predictable way goes up.

In California what we have seen is storage has clearly had that effect to some extent, but there is a limit to it for two reasons. One is how much storage there is actually available, and the other is how much extra capacity there is in other times to build up storage for the peak times. If you don't have the ability to produce a lot of extra gasoline at off peak times so to speak, you are not going to have as much in storage or if you don't have the storage facilities, you are not going to have as much storage.

One of the interesting twists the storage side brings up is the potential for market power in storage. That is if somebody can cause there to be barriers to entry in producing new storage facilities, then that actually could cause a problem in the storage side of the business.

For instance, a company that is already in this business already has storage facilities really doesn't want entry by the state or by anyone else into the storage business. They make their money off the spread. More storage is going to narrow the spread. That is a strong private reason why storers might oppose the state getting into the business. I think there are actually good public policy reasons also to oppose the state getting into the business.

It also might lead to incentives by other companies and particularly one concern is pipeline companies that can make it more difficult for a company to get into the storage business by making it more difficult potentially for accessing the storage through pipelines.

Lastly, let me talk about imports and market power because I think this is where ultimately the state is going. Demand is continuing to expand. Supply is not in this state. We get some expansion each year within the existing footprints of the refineries, but I have heard, and I tend to believe that they are starting to run into real constraints in doing that. As a result, the state is going from being a large net exporter in the mid '90's and now being a net importer a significant amount of the time.

Imports, we trade with other states in

lots of things. I don't think there is anything wrong with that trade, and I don't think California should expect to be self sufficient in gasoline anymore than it should be expected to be self sufficient in furniture or lots of other goods or milk or whatever.

We do have to make sure that the ability to import is available and is not impeded in any way. We do have to recognize what the actual affect of that is due to transportation costs.

What happens in a competitive market is that imports will limit the rents, the extra profits that in-state producers can achieve either through scarcity, real scarcity, or through artificial scarcity caused by market power.

They won't eliminate it entirely. In the gasoline situation in California, there are two constraints on that. One is that there are transportation costs, so supplying the same product in California if you are a refiner on the Gulf Coast, costs more than supplying it if you area a refiner in California. There is a transportation margin, and that is going to get built into the price in a completely competitive market because the margin supplier in a completely competitive market sets the price. If the marginal supplier has these additional costs, that is going to get built into the price.

The second aspect of this is the time lag. Now, if the State runs into a sudden shortage, for instance, a large refinery goes down, a refiner with extra capacity in the State is going to be able to respond much more rapidly than a refiner with extra capacity outside the State.

That lag is going to cause there to be some spike. Now how large will that spike be will be mitigated to a great extent by the storage of product in the state. If there is a lot of capacity to store product, those spikes will be mitigated a great deal. If there is less capacity, then they wouldn't.

I should say, though, it is not optimal to try to eliminate all of the spikes. If we do really have a shortage, the price should spike in order to allocate that limited quantity and allow people to make good economic decisions.

It is also not optimal to build so much storage that you always have extra storage capacity and extra product, so prices never go up and down. You can do it, but it is really not economic. You would be building way more storage. That is essentially, by the way, what we did in the electricity industry in a similar way by building way too much capacity under regulation, so that we always had we had plenty of extra capacity. We ended up paying for all that extra capacity.

What happens in a competitive market with imports is you have a supply that is in-state, which is the lower supply curve here, and that is vastly over dramatized there for effect, just to make it clear what is going on. Is that you have a supply curve here that is the in-state supply, and that you could very well live on in-state supply if demand is low enough. Eventually, if demand keeps growing, you are going to start running into cases where in-state supply gets tight enough that the price goes up enough that it actually encourages imports.

Eventually, I think what we are likely to end up with is demand permanently out in this range. If demand is permanently out in this range, you could still have a completely competitive market, but it is going to have a permanent transportation premium built into the price.

Realistically as demand continues to grow in the west, I think it is quite likely that we will not end up supplying California from imports from the rest of PADD V, the western market. That we will eventually, the marginal supply if we don't build anymore capacity in the west, will start coming from other parts of the country or the world. If that is the case, this price difference will be permanently built into the market price, and that price difference for the rest of the world is probably between 10 and 20 cents.

For eight years, California had margins that averaged about eight to twelve cents above the margins in the rest of the country. That was about the differential necessary to cover the additional marginal and capital cost of producing CARB gasoline.

We now are pretty clearly in a permanent regime or a long-term regime anyway in which those margins are twenty cents or more different.

My belief is that this is what we are seeing. We are seeing a permanent import supply margin built in to the price. That is just the reality of where we are.

Is there this market power? Yeah, it may be at times market power if you are close, demand is pretty close, that a firm in-state has the incentive to withhold the little supply to push the price up to the import level. That is probably not the over-arching problem we face.

The over-arching problem we face is that as imports become the marginal supply, there is just going to be a permanent import transportation premium built into the price. That is a problem for producers, a problem for consumers, and it is a bonus for producers. If you happen to be an in-state producer, you make money.

People have suggested regulating gasoline prices for all the reasons I've talked about. I think that is a bad idea. It is extremely difficult to diagnose how much of the premium is market power. If you get it wrong too low, you will discourage production of gasoline or distribution of gasoline in California, and you will cause gas lines. There is a real asymmetry in the costs of getting it wrong. A price that is slightly too high costs a few extra cents a gallon. A price that is set slightly too low, costs us 45 minutes in line waiting for gasoline.

I remember the California gasoline lines in the late '70's well enough to know which one I prefer.

In the longer run, I think we have to recognize the fact that the problem we face is almost certainly a real supply problem that the state is going to have to address because of the special gasoline we use and because of the fact that we haven't had any refiner built in California since the 1960's.

There have been a number of suggestions, and I will finish up very quickly here since I think I'm about out of time. A state strategic fuel reserve, I actually was on the Attorney General's Gasoline Task Force in the late '90's. We looked at this problem. I was the head of the sub-committee on this. We did not find a good argument for why this state should get into this market process in substitute for private investment in storage.

There are strong incentives. Are they strong enough? Well, the question is, is there enough variation peaked off to pay for the storage facilities, and we didn't see any real barriers to getting into that business with some possible exceptions that people raise about tax treatment, which I won't go into here.

There are some switch over issues about changing from summer to winter fuel that might be smooth some. We have made a proposal for during what you might think of super price spikes to allow non-California RFG into the state, "dirtier Gasoline" still meeting federal reformulation with a fee, using that fee to offset the pollution by buying back old cars. A simple calculation shows that you could easily more than offset the extra pollution, at least for quite a while by buying back old cars with the money from the variance.

There has been intervention in closing in the Shell Refinery closure. That is a very interesting case, I don't have time to talk about it. It is clear that it could be caused by a real lack of economics in that refinery, and it could be caused by Shell's market power. It is probably some of both.

The possibility that the State might help bolster long term fuel markets by the State itself doing its purchasing of fuel through these long term markets in order to build those long term markets, what those long term markets do is improve the stability of long term contract prices and potentially make investment in the industry more attractive.

I think I am out of time. I will stop there. Thank you.

COMMISSIONER BOYD: Thank you, Severin.

Severin, a couple of quick comments. Those of us who have to spend more time thinking and worrying about economics have long recognized what the term "market power" as you defined it means and how it is a regular player in the economic arena. Market power has taken on a very negative connotation for the general public. Unfortunately, I guess, since the '99/200 event, and we have to deal with this.

I am not defending anybody out there, but I just want to point out that we spend a lot of time on the subject of market power because it has a general public negative connotation. It means something bad, and I appreciate your once again reminding us it is part of the democratic economic system and to a certain point, until it gets immoral if not illegal, it is just there to be dealt with.

The other thing that I appreciated was your discussion of imports vis-a-vis -- well, and the statement that this State used to be net exporter now we are a net importer because what I have learned down through the years is that the whole system is built around the concept of regional markets. The regions were historically bigger than the State of California. Refineries were on the coast because it is closer to points where you can import the crude in addition to using your own native crude.

Now we are a net exporter, and a lot of people have -- your little anecdote about Washington reminds me of we've been dealing with a lot of people who are incensed over the idea that we would allow California scarce gasoline to find its way to Nevada and Arizona during these times, yet that is the way the system was built. In each case, they are either 100 percent dependent or highly dependent on that gasoline receipt or they are in big trouble. So, we have a regional problem as well as just a California state problem.

I don't know if you have any additional

comments. I just wanted to thank you for bringing those to our attention.

MR. BORENSTEIN: Yeah, I think it is important to keep in mind that these markets are very closely intertwined, and this sort of idea that in an emergency what we should do is shut down our borders and be self-sufficient in any product, I think, is generally a knee jerk response and almost never the right response in public policy.

COMMISSIONER BOYD: Now I had that feeling once during the heights of the electricity crisis when the Las Vegas Airport was begging for jet fuel, and I kept thinking of all those lights that are on in Las Vegas --

MR. BORENSTEIN: And the air conditioned sidewalks.

COMMISSIONER BOYD: - etc., etc., but we didn't go there in any event. Thank you.

Jacky, any --

COMMISSIONER PFANNENSTIEL: No.

COMMISSIONER BOYD: Thanks very much, Severin.

Okay, Dr. Verleger, you are up, and welcome again.

DR. VERLEGER: Thank you very much. Let me start by saying with a standard disclaimer, I was invited here by the CEC, and it is good to be back. The work I am going to present has been sponsored by the Western States Petroleum Association, but I am personally responsible for all the content. It is mine, not theirs.

I will also say this research is part of a book that I am writing as a Senior Fellow at the Institute for International Economics. I get to live in Aspen, Colorado. I used to live here in California, but I am working out of Aspen.

COMMISSIONER BOYD: I'll ask you the price of gasoline in Aspen later, but not right now.

DR. VERLEGER: It is 20 cents a gallon higher than in California. It has to do with the fact that there's one person who owns all the gasoline stations in the upper end of the valley.

COMMISSIONER BOYD: I believe that is the subject --

DR. VERLEGER: There is a 45 cent a gallon difference between the bottom and the top. The advantage of Aspen is we walk and we bike.

The research I am working on is titled,

"The Gathering Storm". I am going to find a new title because a certain other author once used it before.

What it describes is the situation that is building in the world energy market which one might define as an economic hurricane. One in which we have seen the outer most squall. The problem comes from a combination of lack of investment across the globe and critical infrastructure over the last several years, very similar to the lack of investment that took place between 1967 and 1972 combined with an extremely rapid growth in China and India.

There is a paper on the IIE website by this title and summarizes the initial paper and builds on the problem, and I will refer you there.

My profession is as a writer, an economist, academic on energy markets. I realized last weekend, I think I have been doing this since 1972, which is more than 12,000 days. I have seen a lot happen over that time. I have probably written more academically and professionally about the economics of oil futures markets and commodity markets than anybody else in the world. I have been studying them for 20 years.

I am going to start with just a couple quick comments about the futures market. We heard about a discussion about a two year, three year forward futures price. I have been following it for a long time, and the economists picked one of the graphs that I have been using for years and ran it in August.

Prices have increased dramatically. I make a comment, and I always make reference to the literature from the agricultural economics, literature that unfortunately energy economics seem never to want to read, but Jeffrey Williams is probably the leading authority and the one I cite most often.

Futures prices don't tell us much about what is going to happen in the future. In an article in a (indiscernible) review of agricultural economics that came out a year or two ago, Jeff has a very good point there about the forecasting capacity of agricultural futures prices.

The same thing is true for oil futures prices. One way to think about it is if you go back three years ago and look at what the oil futures market said the price would be on October

12, 2004, you would find it was $21 a barrel or thereabouts. This morning it was $54.

That gets me to a key question before I blend into this of why oil is hitting $50. The word I used to explain it is arbitrage. Arbitrage is not a card game that was invented at Cal Tech. Prices have been pulled up by gas oil, which is the European version of distillate fuel oil. If you wake up in the morning early and you follow the IPE, International Petroleum Exchange, you can find that the movement from about $300 a ton to $500 a ton between middle August and today has been paralleled by brand crude.

What has happened is, Europeans have been looking for heating oil disparately, they didn't stock up. The Germans tend to wait until the last minute and look for low prices. In July they saw the high prices, thanks to our gasoline, and said we will wait. August they didn't start stocking up, so now winter is coming, and they are buying.

That is also being pulled up by Chinese and Indian demand. China has a refining system that cannot process Saudi crude because of the sulphur content. They are bidding up the crude prices.

If you look at product price versus crude prices, you find there is a relatively perfect arbitrage, that is buying the lower item and selling the higher item. It is so good that if you build a model, and the model I had was published in the Review of Economics and Statistics in 1981, you give me a price of crude oil any time say the middle of 1995 and tell me the change in the principal product prices from that day to today, and I can come within about 15 cents of telling you what the crude oil price is.

This model works because, in fact, there is just an efficient arbitrage between buying product and buying crude, and right now we have a heating oil problem. It is going to go away. We have seen crisis like this. I am old enough to remember in metals, buyers double and triple buying steel back in the early 70's when there was shortages. At some point, everybody had all the steel and copper they needed, and then prices just suddenly dove. That is what is going to happen this time.

The background on oil. I've worked with the Justice Department on investigations of the

1996 crisis. I have advised the FTC on mergers. I've also beaten on the head of the FTC people, Commissioner Murris that the FTC policy while preserving competition in the petroleum industry and mergers, has destroyed capacity with a net effect that I think now leads me to believe we are paying about 15 cents a gallon more due to the FTC merger policy, which has lead to a loss in capacity. I was also on Bill Lockyear's task force.

Let me turn to the presentation. I read the Borenstein paper with hope, and I was rather frustrated as I read through it because I have been doing this for so long, working in the government, working in the treasury, advising on this issue, and I know it is politically charged.

I find the double negatives in some of the sentences frightening. For example, "Dismissals of the idea that firms in California RFG market would be able to drive prices above the competitive level are not well founded." I think one needs to have clearer, harder evidence before making statements like that.

"At periods of peak demands produces market power have an added incentive to cut production." They may have an incentive, but on the other hand, one of the points I will make is when Arizona had troubles, one company converted some CARB gasoline to Arizona RFG which isn't very hard, you actually do the instantaneous blending, sent the product to Arizona, and then rushed to bring blending components from refiners in Korea who can't make CARB gasoline. One thing that is not well understood is you can get the pieces to make it and bring it here. They paid extra for the transportation. By the time it got here, they lost money.

That is not what you would expect. You are looking for balance. Speaking of Arizona, I will note, as you know, even if you wanted to stop gasoline from flowing to Nevada or Arizona, under the commerce clause of the constitution, you can't do it. By and large we are better off because of the Constitution.

Third, California prices exceed U.S. average prices by an among approximately over the long run cost of CARB. Recently CARB gasoline had exceeded U.S. averages by an amount that is much greater than the cost differential.

Go back to the gathering storm. One of

the problems is we haven't built enough ships. So, today it may cost 40 cents a gallon to move product from the Gulf Coast here. I won't go on.

Let me come with some facts. The relevant economic market is not California, but includes at least four other states: Washington, Oregon, Nevada, and Arizona. Empirical evidence, if you go across these implies market power, the absence of market power.

The third point I am going to make is gasoline is not electricity for a whole set of reasons. I was living in Newport Beach when the lights went out. They are very different.

Fourth, as we heard West Coast consumers are becoming more dependent on gasoline imports from other areas, and this increase in imports dilutes whatever non-existent market power exists.

Let me start with the relevant market. Borenstein had all focused on California markets. The FTC has concluded that the relevant market is a Continental PADD V. A PADD V is the petroleum administration district for defense that were created during World War II. California, Oregon, Washington, Nevada, Arizona are part of it as are Alaska and Hawaii.

For many reasons, we exclude Hawaii and Alaska. They are quite a ways away, and they are self-contained.

California receives California reformulated gasoline from Washington. California ships CARB-like gasoline to Arizona and Nevada and ships gasoline to Oregon. Oregon does not use RFG to my knowledge.

The FTC, as I said, just issued a major study on the structure of the petroleum industry in August 2004. One of the points I learned in connection with the Shell/Texaco merger is that if a refinery in California produces all CARB gasoline, it has extremely high marginal costs, which means you don't want a high price because you wind up producing some by-products that you just can't do anything with.

Whereas, if an active refinery produces some conventional gasoline and some CARB gasoline and trades -- you know we talk about trading with Japan, well we trade with Washington. We ship the conventional gasoline to Washington, bring back the CARB gasoline, that marginal cost drops by as much as 10 cents a gallon. In terms of refining margin, that is a big number. You want to promote that kind synergy.

One of the real losses we suffered in mergers is in Washington there are two refineries. One was owned by Texaco, one was owned by Shell. They were side by side. It was the last opportunity really we had on the West Coast to create a truly giant refinery that was modern where you could reduce water pollution, reduce air pollution, perhaps even double the output of the refinery had you modernized it.

The FTC using its Herfendal approach, in terms of they apply to cookie manufacturers and everything else, require that Shell sell it and Tesoro bought it, we lost that opportunity leaving aside what Tesoro has done with it or anybody else. The synergies and economies of scale that could have been achieved there were really remarkable.

If you look at market power in terms of this business, it exists only in rare circumstances. What I mean is the ability of a firm to raise, make more money, revenue, by cutting production. That is, Borenstein correctly described the very good work on the electricity crisis where power could be cut.

Depends on your market share and it depends on your price elasticity of demand. Price elasticity and demand of gasoline is a ram minus .1 in the short run, three months, minus .2 for a year.

Those numbers are numbers that Hank Houthakker, who was a professor at Harvard, and I produced in 1973, and for years it was the seminal study, you can still apply these models, this model, and predict very accurately the effect of short term, intermediate term, and long term gasoline price increases. There being at least 1,000 maybe 10,000 studies that have been done subsequently, and all of them come within the same range. I will say with some pride it is because we structured the study right at the time.

Using these elasticity, it is unlikely that any West Coast firm can increase its revenues by cutting gasoline sales. The hard data are not available. Brian knows that I almost -- I have been pushing to get good data on market shares for the five states. California produces good data for companies. We haven't got it yet. It is on our "To Do" list.

The Borenstein presentation is a little

deceptive because they present data on California refining capacity, not on market share. The correct market share data, which are available, show a very different picture.

I think the data for the four contiguous states would show that there is even less potential market power, but we don't have the data yet. What I did a graph that compares the refining capacity that Borenstein had all put together with a market share data that are available from the Excise Tax Bureau.

What you can see is the big difference is for Chevron, and I chose the sticker symbols to make the graph larger, they show one company having almost 30 percent of the market in terms of refining capacity, whereas when you take the market share, they are less than 20 percent, twice that.

The answer is Chevron supplies Oregon from California also supplies Arizona and Nevada. You see the BP share is higher than Shell because BP brings product down, I presume, not knowing it from its refinery in Washington, so it is a very different picture.

The other thing is, there is a little

item "other" which is not present in the Borenstein study that's more than 10 percent because California gets imports of gasoline from a number of sources.

The second point in my presentation is gasoline is not electricity. There is an insinuation which bothers me that gasoline and electricity are very similar with similar options for suppliers and similar consequences, and these are wrong.

There are several major differences. One, gasoline consumers can choose among suppliers. If I touch one of these electricity switches, I don't know who is supplying the electricity. When I go buy my gasoline, I go to a Shell station, or I go to a Costco or I go to a Arco/BP station or a Chevron, I know who I'm purchasing from. I have learned through some tough experience giving speeches that companies actually really work hard on their brand name. Brand does have value.

One of the ways is gas is a differentiated product in both service and quality. Right now, the auto industry is pushing hard to create what they call "top tier" gasolines. The oil industry has had nothing to do with this. The auto industry wants more additives put in the gasoline because they are having trouble meeting some of the environmental standards, and they say they want better injection. Thus, it is a classic battle between two industries. The auto industry wants the cost put on the oil industry, the oil industry says, look, we are producing a quality that meets all the environmental specifications.

We also know that every consumer here in California knows you can go to an Arco station and get a lower price, pay cash or debit card, or you can go to a Chevron station and even get full service. I mean there is a very big differentiation. To my knowledge, there is no much differentiation in electricity.

Third, Severin Borenstein has made a very good point on the electricity issues, about the need for electricity meters to know what the price of electricity is and what it costs.

Houthakker and Lester Taylor, a professor at Arizona, and I wrote papers back in the 70's saying, hey, you've seen different results for demand for electricity than gasoline because the price isn't as well known.

You can drive down the street and when you go in to buy gasoline, if you don't know the price in California it is because you weren't looking.

In Colorado, you don't have to do that, the place I go into which had a price of $3.00 a gallon for premium, you have to look closely.

Fourth, the world's largest intermediary, Wal Mart and Costco also, is becoming a growing presence in the gasoline market. The Wal Mart I will tell you is very different from the California Power Exchange in terms of its buying habits. They invented elbow wrestling.

What we are seeing is a different picture. At the end of the FTC study, there is one paragraph -- there is a section on hyper markets, the last paragraph focuses on San Diego where four hyper markets have come in, Costcos came in and with less than one half of one tenth percent of number of stations have 3 percent of the volume. You can see their entry in looking at the differentials between San Diego and Los Angeles retail prices. It used to be that there was a big difference, they have narrowed it down.

Petroleum inventories, speculate holding. At this point, I think -- I have just completed with the National Petroleum Council a major study on inventories in the industry. It would be nice if there were speculative stocks, there aren't any, especially prices of $50 a barrel.

At $50 a barrel, a refining company if it is holding 40 days of inventories for basic operation and everything, needs a line of credit, $2 billion per billion barrels a day of refining capacity. That is not a problem for the really big integrated companies which have huge reserves and cash balances, but it is a difficult problem for some of the smaller companies.

One of the companies in the East, Premcor seems to be having a good deal of trouble with this, getting enough cash to hold inventories. Bank just look at this and say well, there is this risk. There are these kooks out here who told us if prices could get to $50 and are now maybe worried about $30, we don't want to lend for inventories to companies.

What has happened is refiners across the globe have become much more efficient. They are able to operate now with much lower stocks most of the time. The study reviews supported by the MPC study, there isn't -- I haven't illuminated one problem. You break the infrastructure problem delivery system at all, refineries shut down. Several did shut down because they couldn't get oil.

I have been using this chart for years. It is data collected by the Energy Intelligence Group which publishes PIW, and it shows working days, days of supply, that is inventories divided by consumption of oil and held in OECD country refineries that are commercially available. That is in the oil system, you need oil in the pipelines, those aren't commercially available just to make the pipelines work. You need oil in tanks to run refineries. We have seen this drop from around 22 days down to as low as 5 days recently.

We are becoming more independent on imports. Gasoline demand is increasing at a faster rate than indigenous production. Detroit sold us all on these SUV's, but Detroit didn't build the refineries to provide the gasoline to operate the SUV's. The government has made it difficult to expand refining capacity.

Replacement of MTBE with ethanol has further cut supply out here. These trends will continue. Imports will have to increase. It was pointed out by the previous speaker, that means that California gasoline will have to rise the cost of Gulf Coast gasoline modified, whether it is blending stocks that come from any refinery or specific CARB gasoline modified plus transportation.

I did a simple chart, and (indiscernible) Girth provided me with some other charts. If you look at the sources of West Coast gasoline supply from 1990 to 2003, and this is all of PADD V, you see that there has been a small share of imported products.

(Indiscernible) Girth provides more detail on it in terms of the sources of them, a million barrels per day, and that should be a thousand barrels a day. As you go across, it is a mix now with foreign being a larger supply source than domestic.

Sources of gasoline imports for the last nineteen months rank Canada, other Western

Hemisphere which includes St. Crouix, the Virgin Islands, which is treated as a foreign country for foreign trade purposes, Europe, Asia, the Middle East, and other. Some of this is conventional gasoline, some of this is CARB blending stocks, some of this is CARB.

Four years ago in connection with the Attorney General's study, I prepared a report called "The California Cumundrum" and examined gasoline showing that imports moved, rows fell depending on the spread between the Gulf and the California spa prices. What you see here is in the yellow area, gasoline movements to PADD III to PADD V, that's Houston primarily, and foreign imports, what you see is the red line which is graphed against the right is the differential for CARBOB, that is the blending star for California gasoline versus Houston gasoline. That has been as high as $0.55 a gallon back in August '03 when we had the refinery problems, and it has been trending around $0.35 to $0.40 a gallon recently.

As I said, it is going up because transportation is going up. That differential has to be enough to cover your transportation costs.

Now the increased dependence on imports

reduces the market shares of the seven refiners. Even if there is market power, it is going down. There are a large number of importers, and refineries can't cast -- the seven companies count for only half the imports. Now the importers may deal directly with the independent intermediary such as Costco or Tower Energy.

Tower Energy is not on this list, but in the terms of gasoline volumes, they were 2 1/2 percent of gasoline supply here. The costs of imports are going to rise, and they are going to raise the prices for the reasons that import parody theory, domestic prices go to the import price. Like I said before, and I will say it again, the cost of imports is being boosted by very high transportation costs and inadequate global investment in infrastructure, the lack of ships.

Another element is the Chinese increase their demand. It takes longer for a ship to go from the Atlantic to China than to go from the Atlantic to California. So, essentially, we are losing shipping capacity as China grows.

If you take a breakdown of imports, what you find is traders account for almost half, California refiners account for almost half. Foreign refiners, which would be primarily (indiscernible) and Irving are a little tiny bit.

In a sense, imports are becoming more important and because the California refiners are only half that business, any market leverage or market power is declining.

Conclusion then, the market power issue can only be examined on a Continental PADD V basis. None of the seven firms have a market share to increase its revenue by cutting production.

Gasoline is different from electricity, there are intermediate gasoline buyers who are interested in lowering costs unlike electricity. By this, I mean Wal Mart, Costco, and any of these companies that are trying to achieve the economy of scale and scope for running big businesses.

The increasing dependence on imported products will diminish the market share of California refineries because of the source of imports. Prices will rise because refinery expansion and construction has been constrained.

What can you do about this? Our old favorite, streamline infrastructure expansions.

It is not just here. The Gulf Coast, the East Coast, the whole United States. One of the few interesting elements in the Bush Energy Plan was to kind of deal with this. Most of it was terrible.

Second, reverse port policies that close marine infrastructure. They are closing berths. They want to close berths down in Long Beach. We are going to have to bring more product into California.

Some of that product that comes in to Long Beach, California goes to LAX for international airplane flights. Some of it may go to Arizona or Nevada. Long Beach is becoming a choke point for the whole west. These policies need to be reversed or find another port to bring the product in. All the pipelines go out from there, so it is important there.

Third, recognize that the CEC CARB Energy Policy Report chills the climate for investment in petroleum infrastructure capacity. It is going to lead to greater imports and likely higher prices.

I have a very good friend in Japan who used to be head of Tonin, which is one of the independent refiners. Tonin was owned half and half by Mobile and Exxon. He told me years ago that he wasn't going to invest in new upgrading capacity in Japan because it would take 25 years to pay it out, and Japan was moving away -- this was 1993 -- through hybrid cars and so on. The investment would never pay out.

My friend whose family had owned that company or a large portion of that company since 1880 and who had been forced to take these two majors on by General McArthur was pushed out by Exxon and Mobile, and so the Japanese in their sense of wisdom and kind of reminding people who is powerful, pointed to the Japanese Central Bank. Recently he was one of the final two candidates to be head of the Central Bank. Mr. Nakarara's point that unless you can see a return on that investment and these are very long lived investments, it takes two or three years to permit and everything else just adding a big addition at a refinery, let alone a new refinery. It takes years to pay out. He has a strong point to the CEC. That is if the state is going to embark on a policy to reduce gasoline demand by 15 percent by 2015, you are sending a signal to the oil industry that no, you shouldn't be investing here because the returns aren't going to be there. The demands aren't going to be there.

If you are going to make good on that forecast, that is fine, but you ought to recognize in the intermediate period of time as demand grows because the investment is not coming, prices are going to go up a lot.

You need to be consistent and you need to follow through and recognize that this policy does influence, particularly since most of the big companies that own the refineries here headquarters are either in Texas or in London, or in the Haugue, and they are looking at these markets. If you do planning and investment decision and allocating capital, this is an incentive not to allocate the capital to California.

Additionally, push for full utilization of the Longhorn Pipeline to augment supply to Arizona and Nevada. That would help us. When the Lockyear task force met in 1999, the Longhorn Pipeline was being debated and fought in the courts.

A Longhorn pipeline is a pipeline to

take product from Houston to El Paso, Texas. It gets you to the border of New Mexico, you need another pipeline to get it from Arizona to Tuscon and then Phoenix. Then logically, you would reverse the pipeline and bring it to Barstow so you would have more flexibility.

That pipeline -- Attorney General Lockyear's task force, I think it was 1999, that pipeline is just now starting to fill five years later.

That tells you something about the time on energy infrastructure. The pipeline that goes from -- nothing has been done about permitting, finding the investment funds, getting the shippers to expand the pipeline from El Paso to Tuscon. What we've done is now we've got a lot of gasoline. We can get a lot of gasoline as far as El Paso, and we may be looking at another five years before we can move it the next step.

That was one of our big issues. I think I was talking to Lockyear and I talked to Carter Montgomery who was pushing the thing, and I brought the whole thing into the thing. Nobody really focused on it. The other thing is push for removal of the federal oxygenate mandate.

Lastly, before I go, I have to make a couple of comments that were suggested here about companies bringing up units if they go down. If there is a refinery failure, companies might have an incentive not to bring it back as quickly.

As I said, I have been following this industry for 30 years as an academic, as a consultant, quite frequently angering most of the oil executives by talking about markets, particularly futures markets.

One of the things that I have learned by working with companies, though, from 1990 to 1993 I served on the Volaro Board, was that promotion in these companies for chemical engineers, for engineers that actual -- and it is hard to actually find chemical engineers that are willing to go work in a refinery rather than a nice cool office -- promotion depends on you wind up with units. It is units at refineries that fails, usually not an entire refinery.

Promotion and success and moving ahead in this business depends greatly on how efficiently you operate your unit, how well you are able to get the assigned products that you get out of it, and how infrequently you have down time, and how quickly you get back up if you have down time.

This is one of the differences between U.S. and Asian refinery businesses, is this is a bottoms up business. Every time a unit goes down for a turn around, you have to repair these units, they make changes to it, and every time they come back up, these engineers, and they are usually in their 20's and early 30's, have managed to expand the output. This is called creep. It comes way ahead.

You don't get that in Asia because it is all a top down organizational system. The Chinese and so on and Taiwan and Korea, you are told what to do and so we don't see creep over there. This is all individual incentive and so on.

It is contrary to those kinds of incentives to say well, we will take our time bringing a unit back up. It just goes against the promotional standards you see kind of the ratings they have since this is a competitive business and you are trying to work your way from running one of these units in a fairly uncomfortable place where it is hot and it is dangerous to a comfortable office.

These people work their ass off. I think one of the ways that one needs to look at this is from the literature of Volly Williamson from the University of Pennsylvania, an organizational behavior bringing into economics because we just do not see that sort of behavior.

As I said, when the Arizona crisis came, there was a perfect opportunity for a display of market power, and instead of that, what we saw is companies bringing trucks from all the way across the country and hiring three drivers so they can drive 24 hours a day to get them down from Maine to Arizona so they could truck it up. The pipeline break was between Tuscon and Phoenix, so they could bring the gasoline up to Arizona.

One company arranging to bring product from Korea, pay a high price for the blind stock to get over here, and working to blend it, and then losing money on it, and then meantime shipping out of their kind of working inventories to Arizona to bring the thing down.

You don't see it. The empirical evidence demonstrates exactly the opposite point. Given the charge and given the problem we have, and given the fact that OPEC has done such a wonderful job of raising prices, I find it almost disingenuous for a paper of this sort to kind of suggest the behavior without going out and doing some empirical work and without doing the event studies.

I think you saw on the Finazza paper, if you went through that, in the case of building a strategic stock pile, the industry has really worked hard to keep itself working.

Thank you.

COMMISSIONER BOYD: Thank you, Phil. While you are there, I want to go over your list. Remove the federal oxygen mandate. I guess California has been trying like crazy to do that for some time. So, I don't know if there is anything more we can do. So, we mutually agree there.

Longhorn. I do know California through the Attorney General's efforts and through even letters from this organization, has supported the expansion of the Longhorn pipeline --

DR. VERLEGER: All we did was complete it.

COMMISSIONER BOYD: Yeah, if there is anything else we can do other than go over there with picks and shovels and whatever and help them do it, I will be glad to talk --

DR. VERLEGER: We finally got it to El Paso. Now the problem is get it across Arizona. I know Bill Richardson wants to go across Arizona, but there is a very genuine question about pipeline expansion there.

COMMISSIONER BOYD: Anything we can mutually do to accomplish that, I look forward to.

The one big issue about the policy of the Energy Report and its chilling affect on investment. I know WSPA paid your way here, and WSPA that is their party line with us all the time so to speak. At least you work for them and did the data for them. I appreciate that remark. I understand the remark.

The dilemma we have is sitting here as policy people is -- and I just spent all day yesterday with the National Petroleum Refiners Association and gave them my standard speech and explained the California situation much like you did, etc. etc. I am reminded that we haven't had a refinery -- we haven't had new refineries since 1969.

We have had a lot of creep, and I agree

with you of the ingeniousness of American know how technology and the every accelerating pace of everything that we do, but there hasn't been an exhibit of or a desire to seemingly to expand refining capacity to build new refineries in California. At least we in government don't get that signal.

I like you have been at this a long time. I like you have angered executives in the oil industry for different reasons obviously for almost the same numbers of years. I was there when we did CARB gasoline. I was there when the oil companies told us don't worry about the fact that we aren't expanding in California. It is a world market now and we can get it here.

To me what we have seen the last couple of years since '99 - 2000 is everything you laid out there. We can't get it here. The demand outstrips the supply. Oh Lord, I believe that I agree with you on Detroit and SUV's and that and the efficiency would be wonderful if we were the Nation State of California we would have our own fuel efficiency standards, and we would stretch the supply, but the dilemma is as a policy person, how do you send the signal to get some attention paid to we've got to do something substantial here.

Those policy reports said we really do need efficiency in CAFE, we really do need to streamline permitting better in California, we really do need to address this marine infrastructure and deal with the ports. We have dealt with the ports in the last year or so at nauseam over you can't close the door on these folks.

We have tried and we are working on a lot of these things, but you have seen our charts and graphs. We still show that if you implemented all the alternative fuels and reduced demand and this that and the other, that we are confident, the people in California, in a few short years will continue to have a demand that far outstrips supply unless we do some dramatically different things.

I guess the 15 percent reduction was an opening shot at 2 by 4 across the forehead or something to get some dialogue going on what we do. I guess the hydrogen highway is another new thing that many people are working on, and I serve on the governor's advisory group on that.

Yet, I am willing to say to the public, it is a long long bridge to the hydrogen highway, but yet it may happen some day because the very industry we are talking about here is part of that effort as well and sees the long range future.

I am not so sure if we didn't say, you know, didn't throw out that dramatic reduce your hard dependence by a certain date, that we would see the investment climate change. A lot of us just haven't seen it for years and years and years.

I think a lot of us, and I certainly agree with you, and we have had this discussion before that some of us who have had more familiar with China, I have been fortunate enough to go there many times with the U.N. and what have you, and I was there just last year on vacation, and the place scared the daylights out of me in terms of what it is turning into.

We have just never seen a signal, so we had to send a signal. I look forward to the rest of this workshop today to help us straighten that out.

DR. VERLEGER: This language, by the way, was mine, and you know --

COMMISSIONER BOYD: That was just a cheap shot by me and my friends from WSPA in the audience.

DR. VERLEGER: I deserve it, but you and I go back. I was in the Carter administration working on these energy policy issues, and I guess I have not been fortunate enough to go and be in China yet. I've been many times to Japan, but I've been talking for the last year with the Chinese people trying to figure out how they build a strategic petroleum reserve, which they haven't started on yet.

As I look across the energy industry in total right now, I'm very concerned about the absence of investment. We are seeing the absence of investment in drilling for oil, and I think one of the things for the President of TOTEL really put his finger on it recently. He said, we are going to give money back to our shareholders unless we can go drill in OPEC countries.

The President of TOTEL, I think, demonstrated kind of the risk of adverse nature that has come about in the executives at least at TOTEL and a couple of the other big companies. They've grown up over the last 25 years. They probably started in the business before you and I did. They have seen the people who take risks lose their jobs.

My question, the question I ask quite frequently is where is Mike Bolen now, and everybody says, who is Mike Bolen. He was the last CEO of Arco. What has happened is the companies, the surviving companies are the companies that were more conservative in terms of their investment strategy going forward. That is a fact of life.

We have seen this in lots of other industries where growth has slowed down. The oil business is not Silicon Valley. It is not a business where growth is 20 percent a year. It is 1 1/2 percent a year, and it would be less than half a percent a year if it weren't for China and India.

It is a conservative environment, and that is why we are not seeing -- we see kind of the slowness in investment. The reason I bring up the CEC CARB policy is that just provides yet another indication of hey, be careful, don't invest, pay your money back to your shareholders. It is worse in print because it guarantees there is a popular debate right now, are we running out of oil.

The fact is, we are not going to know because we are not exploring for the oil. We are not going to have the oil there, so you know, it is almost an irrelevant question. Nobody is putting the money out to find it.

COMMISSIONER BOYD: Thank you. Jacky, any?

COMMISSIONER PFANNENSTIEL: No.

COMMISSIONER BOYD: Our next presenter is Jeffrey Williams, Dr. Jeffrey Williams. Welcome back, Jeffrey.

DR. WILLIAMS: Thank you. I have a very different type of talk, but I would also like to put all this big subject in perspective that these are fairly universal topics that we are dealing with. The issue is how much should the State worry about them.

My own major form of transportation uses a great deal of biologically renewable natural energy by eating 20 pounds of hay a day, and I don't think you all are aware of that, but you can spend a lot more on hay than you can spend on gasoline. In the last year, the price of hay has gone up 40 percent, imported from Oregon because of U.S. Government policies there in the Klamath Basin.

These things happen --

COMMISSIONER BOYD: I had two daughters. I know the price of hay.

DR. WILLIAMS: Well, we will leave it at that.

I want to go from those big picture issues, though, to some smaller ones in a sense of studying it, a microcosm of the California gasoline market and looking at the spacial patterns in rack prices in Southern California.

In thinking about the issue of market power, it occurred to me to look at the spacial pricing in particular with the idea that if these very clever profit oriented firms are able to keep up the price of gasoline, they are surely clever enough to figure out where they send gasoline and affect the prices accordingly, so that we ought to see market power expressed in spacial patterns.

This is certainly true in a number of other industries. The tomato paste industry here in California pays a blanket price to all producers of tomatoes, absorbing the freight charges, underpaying farmers that are close to processing plants and so forth.

Those of you who are paying attention to politics probably know that there is a pricing differential between drugs in Canada and in the United States that more exceeds transportation costs.

All of these are being compared to a competitive benchmark in some sense that prices by space ought to represent known costs of transportation and marketing and so forth. We often make this comparison.

I have a further proposition that in an industry like the gasoline and oil industry where conditions are changing a lot, there ought to be changing opportunities to exploit market power in the spacial dimension.

So, with this in mind, I thought to look at some of the spacial pricing in California. Specifically, I want to look at the pipeline system in Southern California, and OPIS-reported rack prices at various terminals there in Southern California.

Because of the way that OPIS reports prices, which I will talk about more in a minute, I have five locations to look at. I have picked out five companies, all refineries and what prices they do, and I specifically made them as anonymous as I can in this analysis so as not to prejudice you by the name. Indeed, I have jumbled them so that I don't even remember who is who.

They have presidents in all of these markets. Some of them are selling branding and some unbranded, so we can look at that issue too. I have concentrated on the years 2000 and 2002. These are daily prices. This is quite a lot of information. I haven't gone too much farther than that because of the complexities of switching from MTBE to ethanol, although I want to look specifically at the pipeline break that Phil Verleger was referring to in the summer of 2003 and how it affected prices in California.

Let me explain a little bit now about what I mean by this pipeline system and the markets I am looking at. I want you to appreciate initially that you are seeing the strongest display today of the presence of market power.

This beautiful diagram done in Adobe Illustrator on a MAC, when translated into power point on a PC loses all of its labels and all of its tables. I am not saying anyone is responsible, but it does seem to me that there has been an exercise of market power here. You are to infer something about the Southwest tier, and this is LA, and then we have a terminal called Colton. Also LA shifts to San Diego, Colton goes up to Barstow, and then to Las Vegas. There is a pumping station here from which we go to the Imperial. I am going to look at this price differential a lot. There is a pumping station into Arizona to Phoenix, and there is the El Paso to Tucson pipeline.

There are actually two pipelines here going either directions and the breakage of one of those in 2003 is relevant. These pipelines have specific tariffs that don't change. My beautiful table in the upper right-hand corner shows you the Kinder Morgan tariffs, which are constant through this period.

Let's just keep one number in mind. It costs by the tariff 1.5 cents per gallon to ship from the Watson gathering point in LA to Imperial. So, we might imagine that there be a lot of price differences between LA and Imperial of about 1.5 cents per gallon, maybe a little higher because there are other costs.

There is a great difference from those systematically, we might guess something about market power. That is the idea of what I am going to look at.

Let me first show you all the prices of these five companies at the five locations. They are not at every place. This is over the period 2000-2002. Could everybody see this diagram fairly well. I find it striking how closely parallel everything moves.

It is not at all obvious that there is a great amount of market power being exercised in this spacial sense, at least from these diagrams. The lows are the lows, the highs are the highs pretty much everywhere.

Unfortunately, I was inclined to look a little more closely at these diagrams, and now I get to see more confusing things.

Let's start by looking more closely at Imperial. I've tried to make the graph show a little more closely what is going on. You see a lot of colors. We economists all have the view that the same thing, this is gasoline, the same commodity should sell for the same price at the same location. So, how come all of these lines aren't one over the other. That is strange isn't it in some sense, or it suggests that we are not quite understanding everything that is going on in this market.

What I want now to investigate is how is it possible that prices really aren't the same in the same locations or the price differentials.

Here I have two companies, company "X" and company "Y" among that same list, one selling branded and one selling unbranded, and these are the four different price differentials measured from Los Angeles.

Let's look at the unbranded first. The Colton Los Angeles one is fairly constant. Imperial Los Angeles, that's the blue, is that 1.5 cents, not exactly, but you know, it is nothing else either. Let's look at that pattern and try to figure out that company, what amount of market power was it exercising where and why. I don't see any logical pattern to that that would say that it exercises spacial market power.

I see that even more in the unbranded company. What are their pricing differentials about? Day to day they are changing. What is changing about the demand conditions in the various locations that would cause that amount of price differentiation day to day? Something else must be going on.

It is not even that the farthest one, Imperial, is always the highest. Notice that there are even some times when LA prices are below the other locations. It doesn't fit. Most important, it is not the same every day. That doesn't fit with any model spacial prices.

What does it fit with? Here is just the Imperial Los Angeles spacial, not 1.5 cents, but very different by company, and here is one that must not have been wanted to be selling gasoline at Imperial - 10, the red one.

Some of you are probably saying, well, this is due to the way OPIS is reporting prices, and that might be true. So, let's explore that idea a couple of ways.

One way is to look at rack minus prompt in Los Angeles. What we mean by prompt, that's for gasoline delivered at the Watson terminal to go into the Kinder Morgan system, and that is what has to go to all these other locations where as the LA prices are around that location. So, we could look at within LA market, you would sort of expect gasoline in LA to sell for the same thing. So, shouldn't the rack minus the prompt price be pretty similar. It is not for a lot of companies, and it is sometimes negative.

Some of those are with the seasonal changeover and specs which occur at a different time in the prompt market than in the rack market. But this is much more variation here than would be expected I believe.

Some of this is due to the very nature of what we are calling the LA market. The colors mean less than the shapes, and this is from a couple of years ago, and so some of the companies involved are different, but Watson is the Kinder Morgan location that is sending off on the pipelines. Next to the right most dot is a pumping station that goes down to San Diego, and then there is the Colton rack and terminal.

You see that Colton is really almost part of LA and probably should have more pricing similarities some of the eastern terminals in LA than the western terminals, but OPIS defines LA as all of the other terminals, not Colton.

The spacial patterns within LA prices,

then, are very complex. Sometimes a refinery is shipping to other terminals along the route to the Watson and other times away. I defy anyone to figure out what would be the proper spacial pricing pattern in this complex system.

Then we take some average prices of that and call that the LA price. It is not surprising to me it doesn't behave in a very sensible way as if it was one location. It's not.

Here is some other puzzles. The rack prices as listed by these two companies. What digits to they end in? I thought I would ask that question. Branded company "X" almost regardless of the location likes to have its prices end in .00 or .50 with very few exceptions.

How will that affect average transportation costs? Branded company wise using much more of the price range, but it too is mostly using .50 and .00.

What model, if any, profit maximizing company says that prices have to end in .00 or .50? I don't know of any, and yet they have this bureaucratic preference for these prices. Perhaps it is because some of the rack prices are really nominal prices that are then negotiated with larger jobbers that will be picking up the gasoline and so forth, but why start with .50 and .00.

Something is very different here which suggests that any inferences we draw about market power from these particular prices has to be very careful because there clearly is at least a bureaucratic tendency to favor certain prices. I don't know why but it is there.

Let's look at some other patterns of the pricing of these two companies. We've asked this question at each location. Shall we look at Imperial just to be consistent here. What day of the week has the low price offered by that company? If you think prices are moving up and down and they surely look like they were in all those other figures, what day of the week should be about 20 percent for each day, right?

We notice, at least at Imperial, that is true of the other places, too, that branded company "X" typically has its low price on a Monday and then a Tuesday and not at the end of the week.

Now, what is going on there? I think it has a lot to do with the pipeline logistics where the week actually starts on a Thursday. We are looking at the end of the week on a Monday actually or a Tuesday. Pipelines in the Kinder Morgan -- this Kinder Morgan pipeline system starts its day of the week on a Thursday with the first deliveries at the other locations, not on Monday. The nomination had to be in for a week earlier, so this is actually a commitment a week before its getting the gasoline there.

If you are a company, company "X" here who already has the gasoline in Imperial, you've got to sell it by Thursday or so when the next shipment starts to come in or Kinder Morgan is after you. I think that is when the low prices occur. Some of this is definitely pipeline logistics effect.

Look at branded company "Y" seems to do this even more. I've also looked at the day in which the price was changed. So, sometimes prices will stay steady for a couple of days, and then be changed. Which day of the week is that? This is less strong than the previous diagram, but it looks like more often the prices are changed around the pipeline cycles key point of the Thursday, but I am less certain of that. There is at least the suggestion.

This pipeline cycle is quite important, and I don't think we all appreciate enough of the complexity it adds. As I was suggesting, there has to be a nomination of the Kinder Morgan system, and that freezes the week before. Some of the other pipeline systems in the rest of the country allow adjustments up to the day of shipment, although at a cost. Not in this Kinder Morgan system.

So, companies that want to sell in Imperial are making I guess ten days or so ahead of time of how much gasoline they need to have there. It is not surprising to me that they get that wrong. It sure doesn't look like they are coordinating very much because a lot of them have very different prices at Imperial at the same time.

You ask why don't they trade their inventories at Imperial, well, that doesn't seem to be happening. They are looking at this at more of a personal company level and that probably has a lot to do with their branded contracts I would guess. I don't know because I don't see the quantities being sold.

I do know that this is a much more complex spacial problem as arbitrage than we are imaging because of other features of the pipeline system. Once you have put it out say to Colton, and you regret that you put it there as a company, you can't send it to Imperial. There isn't a pump back into the system.

There is a commitment to send it to Colton. Certainly a commitment to send it to Imperial because you can't pump it backwards. I think that inventory management problem and that spacial pricing pattern that should result is far more complex than anything that we have ever ever thought about. So, our ability to judge whether there is market power in that system, is much more difficult.

That isn't to say there isn't market power, it is just to say we are not able to discern it because we don't have the benchmark against which to compare things.

The final step let me apply some of this type of complexity to the situation in 2003 when one of the Tucson/Phoenix pipelines broke. As I understand it, that El Paso/Tucson one was sending most diesel to Phoenix, while the gas line went the other way or do I have it backwards? I have it backwards. All right, it was one of those.

The pipeline from Tucson to Phoenix broke on July 30 I believe, and within a week they thought about reversing the existing Phoenix/Tucson pipeline to go the other way which helped relieve some of the problems.

Some of our same companies are dealing in the Tucson, Phoenix, and El Paso markets. These companies I have to call "X" and "Y" branded and unbranded. Let's look at their prices. Around the June 30 break, this is conventional gasoline now, there is a big increase in the differential between Phoenix and El Paso and Tucson and El Paso as one might expect.

A little more surprising to us is that Phoenix Imperial price differential. First of all, why is Imperial having conventional gasoline, you are not supposed to sell that in California, right? Well, you can at the wholesale level, and it is being trucked in to Arizona, so there some rack prices for conventional. They stay pretty constant, although they are moving some.

There is a similar story in diesel prices. Yes, the two types of diesel are different in California and Arizona, but that is not the main story here. The Phoenix Los Angeles spreads for these two companies seem to have moved in early July and August, although the unbranded company already had a big premium in Tucson and Phoenix relative to other locations. I don't quite know why, but that was what was happening.

I am not interested in this and what is happening in Phoenix, it is what is happening in California. Here is the situation where a major disruption on the bordering state, you'd think it would be an opportunity for the refineries in California to change their spacial pricing patterns within California.

Let's look at the pricing patterns of these four locations within California. Here are the same two companies and their various spreads over this period within California. The branded company "X" changes them a little bit, but over this period they are pretty constant all through this pipeline break.

Branded company "X" seems to have changed its pricing quite a bit but not until September. That might be a spec change that we are picking up here. I don't see any major change in the pricing pattern in this period, and this was an opportunity I think we would agree for the exercise of market power if it was there. At best, it is very weak evidence of that.

I look finally at diesel, which we had mentioned before in terms of California prices, but here we have the same diesel rack prices at these locations, and they are not reacting very much to this pipeline disruption, but they sure are wiggling a lot in and of themselves in a way that I don't think we would have normally expected to see.

Surely traders who are looking at these prices every day understand they are wiggling all the time, but I don't think economists understand the enormous variation in these series and how it makes difficult any inference about what is going on.

I'm led to these conclusions. I am sorry I did any Empirical work because it was a lot clearer until I did it. I'm forced to conclude that this spacial price differentials in Southern California, wholesale gasoline markets accord with none of the transportation tariffs that are regularly posted. That very simple competitive benchmark that we imagined clearly doesn't fit the facts.

Neither does the observed behavior accord with any simple version of market power that I have ever seen proposed or would even attempt to even try to imagine.

I think these systems are just much more complicated than we appreciate, complications due to the branding contracts which I haven't gone into too much, but the minimum take, maximum takes in a month that each one of those has means the prices are much more than the typical spot price that we usually imagine as economists.

I think we see some examples of administrative preference here. Some of these are large bureaucratically oriented companies that like whole numbers I suppose. They probably like very rigid quantities too. I am imagining, but I am sure most of you will confirm that is what is happening.

How that plays out in terms of the pricing is something that I think makes it very hard to judge whether there is market power. There is something going on, but it doesn't fit simple models, but it is not necessarily market power.

These are all OPIS prices. How much discounting is going on or price changes during the day, quite a bit, though some of these fluctuations are beyond any amount of discounting that we might expect which would be half a cent or a quarter of a cent per gallon.

I would imagine that much of this is due to the geographic irreversibilities. Once you send it to Colton, you can't get it back into LA very easily, let alone if you had sent it to Imperial and so forth. The logistical lags that are at least ten days if not more here and the constraints that the storage system at these various racks put on is doing a lot to cause the prices to move spatially a great deal.

The only way we would ever really know whether that is happening and be able to confirm some of these theories I've proposed now would be to look at the quantity data at each location. We are lucky to get the price data at these locations only due to OPIS. I am sure most of you know OPIS is a monopolist when it comes to -- or exercises its market power when it is selling its price information. I can't imagine how much it would be to get the relevant quantity data.

To really understand this system, I think we have to know the flows into each location all the time. From that deduce whether anybody is thinking about the price affects they have.

I come away from this exercise wishing that the world was simpler because then simple models of market power might apply.

Thank you.

COMMISSIONER BOYD: Thank you, Dr. Williams. I find this fascinating. Frustrating, but fascinating, and particularly when you inject organizational behavior, human behavior. I think you are right. I have been around a long time, and I see how the behavior, the species has so much to do with its little quirks and what have you.

In any event, thank you very much. I appreciate that. Commissioner Pfannenstiel, any comments?

COMMISSIONER PFANNENSTIEL: Just a comment that I also appreciate the complexity of it. I think that your colors show that probably about as well as anything could.

COMMISSIONER BOYD: Greg Haggquist.

MR. HAGGQUIST: Thank you. Commissioner Boyd, Commissioner Pfannenstiel, I'd like to thank you first of all for the invitation to come back and you've seen part of this before, so I hope like President Bush, the second time around the content might be the same, but maybe the presentation will be a little bit better. Let's find out.

We've heard two views. It reminds me of Rashomon, the great Japanese movie by Akira Kurosawa, right where everyone sees the same event from a different point of view and reports it differently.

Dr. Verleger gave us the sky view of the PADD V, market power analysis. Dr. Williams has told us about the ground level view of market power. In both cases, there is no indication of market power. So, let's see if we can come into the middle and find out if there is any contrary indications.

How to play and shape the market, role strategies, and the consumers as you well know at the Energy Commission, are at the tip of the spear and always complaining.

This presentation is kind of an amalgam

of things that we have done in the past, a study we have done with Stillwater, Mr. Hackett out there, and we've done with a EIA studying not only California but New York and Connecticut. We need to understand how operating traders and the supply people and marketers and what they see in this market. What do the blenders see, and what do the potential sellers of cargo see, the off shore suppliers.

Of course, WSPA says the market works, so if it is not broke, don't fix it. The question is, is it broke? Is this kind of a gathering, is it a debate, or is it a dialogue? Hopefully a dialogue with an element of debate.

The terminal operators see congestion, and the consumers don't know what they see except high prices.

We will go through these quickly because there are a lot of slides and we will just run through them and try to linger on the key points.

The market participants are the major oil companies. The cargo pipeline traders, the major oil company traders, and the traders have to be recognized for their roles even within major oil companies.

There are supply balancer type traders, and there are traders who are sort of in-house contract type traders who arbitrage both the system and the international global market and get rewarded accordingly.

We need to consider how price formations occur in relation to pipeline scheduling, which Dr. Williams has just given us a very good statistical view of, but I will try to give a little more of a dynamic element to it here.

We have to think about leveraging. When we know that 25,000 barrels of 50,000 barrel transaction on the pipeline are purchased on the pipeline can lift a million barrels a day in California at the retail level.

We know marine storage is important in all this. Downstream terminal space is important. The availability of foreign supply, and of course, forward market liquidity all play an important dynamic part in the price formation and the elevation, relative elevation of California prices, against the rest of our fellow Americans.

We will talk a little bit about infrastructure, the flow through the infrastructure, the arbitrage from outside the infrastructure into the infrastructure, the backwardation and how that impedes the flow and blockage in access issues because business, like athletics and professional sports, is a game of blocking and tackling. There is not conspiracy theories, there is nobody sitting in back rooms figuring things out. We need to understand the dynamics within these natural forces of competition.

The marine storage, don't build it and they will come. Yeah, we talked about that before. There is a lot of pent up demand for terminal space, we know that. We haven't been able to break through that down there in the harbors. The Energy Commission is working hard on that. The harbor at Long Beach and LA harbor, of course, the gateway to the islands of California, and you can only carbob in here. We know that into California -- no, that's not true. We can go through California and in to Arizona and Nevada, but we are talking mainly California taking carbob.

We need to see tankage as something other than a blemish on the environment. We know we have to keep things moving. We don't want to sit on inventory when prices are as high as they are today. So, there is sort of a tacit just in time inventory practice going on if not explicitly certainly nobody wants to hold the hot potato of $53 a day to crude oil to inventory when it drops off and if it drops off.

Foreign supply. There are all sorts of problems in getting California carbob type gasoline from anywhere else. We know that. We don't need to go through all of these, we've been there before.

The forward market liquidity. This is one chart that doesn't really show us anything except to trigger our understanding that outside supplier sitting in Australia or the Caribbean or Northeast Canada or in Korea are all looking at the forward market a month away, not today's market.

When we see, for example, today we are at $0.40 a gallon above NYMEX, aren't we for CARB gasoline. CARB gasoline is $0.20 a gallon above the other bobs, the Arizona bob and the LVBOB, the Las Vegas bob, so all the bob's are in contention with CARBOB winning the fight by $0.20 a gallon against the others and all of them $0.40 against

New York bob.

When we looked at this back in May, we had sort of a meeting a few months ago and looked at the spot to retail, this is kind of graph that is less noisy than the other ones we looked at. I think it is really a very very important one.

The red lines, of course, are the California average retail price coming from the EIA statistics. The green line is the spot price. This is the price that's reported by OPIS every day, and the blue line is, of course, the forward market, the futures market Nymex.

The key here that we need to pay a lot of attention to is how this price moves every day. This is far more important in terms of analyzing market power than the Jeffrey Williams graphs that break it down into Imperial and Phoenix and all that scheduling stuff.

It is also more important than what Mr. Verleger showed us where those imports go into Oregon, mostly into Oregon, outside of California or flow through into Arizona and Nevada. So, we need to look at what's really going on. This OPIS pipeline price it gets transferred to the street, and when the street stays up there, is this $100 million, $200 million, a $1 billion, $2 billion, figure it out and you will be surprised how much it really is.

Blending. It is important in other markets, and not so much the West Coast because you can't do it unless you are refiner. Alkaline, blend stocks, chemical octanes, and all of these issues are key to markets that are open access markets, like New York Harbor and Singapore and so forth.

These are things that have happened this year. The MTBE ban in New York and Connecticut. How it affects us largely is by the feed stocks and the octane blending components. Our premium gasoline right now is $0.25 a gallon above regular gasoline. $0.25, there is no premium gasoline around and it is going higher differentially. We predicted this. We said this when we came here last February this would happen because of the squeeze on octane components.

Sulphur deregulation, sulphur reduction, and strong chemical demand. The chemical demand is pulling what ever small amounts of octane blend stock might be available away from us. The world economy, not only the U.S. economy, has kicked in, China, we've heard that a few times. We often overlook the inter-action between the chemical industry and the gasoline industry in terms of the octane components. High natural gas prices are part of the whole picture, and China and India as usual.

The key is the highlighted yellow part, the very tight high octane components. This is what we said back in February. We repeated it in July, and here we are today with a $0.25 differential for premium. With a $0.40 differential between California and New York.

Go to the highlighted bottom. Freight rates have doubled. I was working a VLCC the other night from African into China and the shipment, one shipment from West Africa to China, which a few months ago was $6 million a pop is now $9 million a pop. One voyage $9 million to get to China from Africa.

Security issues we know is part of the shipping environment today. The shipping is tight. There is not enough tonnage. The OPEC is pumping as much oil as they can driving the freight rates up, and then we have the added security issues.

The key as far a security and California gasoline prices happen when you have to delay your discharge, and that pushes the price up in a tight market even higher. As we can see, these OPIS prices can go up five, ten cents a day and much more from time to time. Freight rates have doubled.

The last barrel our esteemed economist will explain to us how the last barrel, the last transaction in a commodity market sets the price for the day, the last deal at the close of the Nymex kind of defines that day's price. The last barrel in California is often a blended barrel with alkaloid, a feed stock. So, this is a question.

How does this relate to market power? Well, if there was a big blending center like you have in New York Harbor or in Rotterdam or in Singapore, and you had the hurly burly of a blending operation, then the refineries would not be the only place where blending could take place. That level of market power would not be exercised.

We've got to look back in order to see forward. The people in this room, many of us have been through this looking back process through the strategic reserve study, MTBE phase out, and so forth. Most of what we have predicted has happened.

I'll say one thing, that traders get a bad wrap sometime, but traders can't be wrong, traders have to be right or else they don't survive. What they say has to happen or they don't have a job. They know what they are talking about more they are given credit for quite often.

Scheduling the short squeeze. Jeffrey Williams has pointed to this, and we could get into that with great detail maybe this afternoon. What really happens on those pipeline movements out to Imperial and down to San Diego.

Ship, pipe, and street, right? How does the ship relate to the pipe, how does the pipe relate to the street, and ship, tank, lungs, and pipeline. Lungs come into play because you can't build new tanks because of the NIMBY resistance at local level because people are going to get diseases from the ozone.

California versus other U.S. markets. We know there is more volatility. This is nothing new. Higher prices, less competition. Less competition, less liquidity and more resistant to change.

Every one of these can be challenged. It is the economists job to challenge these generalizations. It is the traders job to know they are absolutely right or he doesn't have a job. He has to right about them.

California, how much of an island? It is more than three weeks by sea because it takes time to prepare cargo to come here. Three weeks is the best case sailing time. We are isolated by specification, highlighted today by the difference in the bobs, you know the $0.20 between CARBOB and the other bobs.

We are constrained by infrastructure, we know that. We are paralyzed by politics by some degree. The Energy Commission has done everything humanly possible to break through that, and we have made some progress.

What does it cost? This is a very busy one. We won't look at this very closely, but except to say that the blue box is the California CARBOB gasoline flies above everything else. If I were to leave this up long enough or you look at it on the internet, you would be able to see how these events depicted created a price movement that are also depicted.

When we were here in February, we started this kind of work looking at the consequences of having to import the last barrel not so much as a CARBOB all the time, but often as alkylate, a reformate, a blending stock that has to go through. If it is not market power, what is it? It has to go through a refiner/blender.

We predicted mobile volatility. We predicted more expensive imports, irrespective of the crude oil escalation. We predicted higher prices relative to back East, $0.40. We predicted more scheduling difficulties. We heard that everywhere, and what has happened since is another busy chart here shows you what had happened through May, the last time we got together.

Don't try to squint through this particular chart. You can look at it on the internet later. They post these. You will see that every little event in California causes price reaction. We've got them all over the place.

Here is a quiet little chart. All we are showing here in June, a couple of months ago, is that the crack spread looks pretty healthy, the unleaded clear and the WTI price. Don't forget, there's WTI price. This is the Nymex crude, most of the refiners here run ANS, which today is like $4.50 a barrel discount off of this. We can explain why that is in this afternoon's meeting if anyone is interested. So, this is the quiet part of the market.

The spot to the street is the key as I said. To get in between what Dr. Verleger has presented and what Dr. Williams has presented, we have to go to this spot, the street, pass through. The pass through has not happened as quickly on the downside. Price sticking has cost billions to consumers. There is nothing wrong with that, the way that it is put there in that particular -- it sounds as though there is something insidious about that, but there isn't. This is just a fact in today's market. They have had their bad times like other businesses have.

Tax collectors are doing well because of the structure of the gasoline taxes in California. Higher prices bring more revenues into the state.

We looked at one particular price spike a couple of months ago that did not occur because of any identifiable event. It was when the price jumped up to $1.71 a gallon in the spot market.

The forward market jumped $1.61 at the time. It was like $0.20 or $.30 a gallon increase. It had to do with scheduling and reshuffling of things, and this is the kind of thing you should really talk about in a shirt sleeve workshop like this is supposed to be.

How does this happen? How do you jump $0.20 or $0.30 when there is no event? When that gets passed through the street as we showed earlier, and the street stays up there, and you add that up, you are in a billion dollars pretty quickly. We can't afford a billion dollars in California. Of course, it is the consumers that are paying.

However, looked at that back in May, things have changed. The picture has changed in the last few months. The same chart now shows a little healthier picture. That is the spot price, OPIS, is going up and retail is now lagging a bit like it used to do in the old days. Now whether that is because of politics and all of the noise in the press that oil companies are making too much money, therefore, if you are making huge margins at the production side and good margins at the refining side, maybe you don't have to perform so well at retail. I don't think that is really the case. I was just throwing it out there.

We are catching up, as you can see, and it is going to go back up and stay up when the spot market drops down.

Here is another one that the economists can pick apart, but it is the very simple that the U.S. average distribution of independent retail versus the California distribution of independent versus integrated retail is totally reversed.

This is workshop-type stuff. These charts lead to discussions, so the philosopher, Michael Poloni called these things approximatable clues to a distill meaning, so we have to go back and look at that kind of a flow chart as an approximate clue.

What is the distill meaning? The distill meaning is how a price is formed through that flow. What happens when an event occurs or does not occur that causes the price to jump up in California? Let's call it a refinery disruption, for example, because that is the most famous kind of event. It could be a batch going off test, a scheduling disruption like we saw back in May.

The refiner or the company that short

priced to borrow, all schedules are full, there is no exchange barrels, the next option is the spot pipeline. You have to go out and buy 25,000 or 50,000 barrels. That is the next thing that happens. If you do that, and the market is a little bit tight and it is headed upward a little bit, we demand from whoever it is, the pipeline scheduler, the trader who is short, the disruption causes the -- drives up the spot price, the new price is quoted by OPIS every day. OPIS price is transferred to the unbranded rack.

The unbranded rack. You know we are always saying integrated companies cause these problems. The words spreads quickly. The independent jobbers pass the new price to their commercial accounts. The independents raise the street price, and branded retail moves up in sympathy.

So, it is not so much big bad integrated Exxon Mobile or BP doing all this stuff, they are going for where the market is leading them, often being led by the independent side. So, the tail does in fact wag the dog in California. The independent sector because it must. This can become a debate, but I am putting that out there.

Finally, you can't borrow on the pipeline anymore, prices are run up to high. It has finally become attractive to come in from East Coast, Canada, so you put your ship on the water, but you find that supplies are tight out there, shipping is expensive, the market is in backwardation, the cargo finally sail on the confirmation of sustained high price, not just because we have a little needle of a price spike. It has to stay up there a while before these come in, and so we pay at the pump.

Here is another busy one that when it gets on the internet, look at this, because what you will find these little pyramids down here or inventories when cargos upon cargos arrive -- when you study this particular chart closely and it can be repeated through any number of time periods, you will discover that the cargos are put on the water after the price spike has happened, and they arrive after the price spike has subsided if they get here too late.

Scheduling is a big part of price formation in California in tight markets. If you are short, if you owe me gasoline, and I owe him gasoline, and I have to go on the market and buy it, you've got to come up with it. If you don't come up with it, you've got a problem. You are not going to be in this business anymore. So, you have to go into the market and get it or I can't supply him.

There is a buyer's option. I've sold you gasoline. You've sold me gasoline for delivery this month. I call you up I want it. You are having trouble, you went short, you didn't cover your position. So, you have to go out and buy from someone over there, but since it is a buyer's option, you need to give it to me now. As Jeffrey Williams point out, Thursday every week is drop dead day. Tuesday day is freeze day.

DR. WILLIAMS: Thursday is usually the bad day.

MR. HAGGQUIST: The bad day. So, when you have to go into the market, you have to go into the market. When you do, you drive up if it is a little bit tenuous, you are going to have a price spike in front of you. Things get worse when supplies are tight obviously.

This is just a little matrix of how a pipeline schedule might work. What Jeffrey Williams was pointing out was how these prices play out at the various outlying terminals. What a scheduler is looking at is something like this, July, August, September, his long positions, his short positions. If you are down here in a short market, many times you want to be short. You saw the BP on Phil Verleger's chart is structurally short. They are always short, they want to be short. Chevron is structurally long, right? That is something we can talk about this afternoon too.

That has market power significance. The cost to the consumer is high. This might be inaccurate, but at least it is directionally accurate.

Market power, the independent view, this was Dr. Borenstein's study that I did read a few months ago, and I thought it was pretty good as far as it went. Market power is related to infrastructure. This is the quotes from his paper. At wholesale level, market power is related to higher prices in California. The underlying causes are complex and political.

However, I agree with him, the market power exists. I don't agree with the other two documents that a market power does not exist.

More quotes from economists. If the

refiners in the market are nearing their refining capacity constraints and the marginal costs of producing more gasoline is high, then prices must rise significantly. That is what Dr. Borenstein, he is right about that. These quotes are accurate ones.

To the extent that the inability to interconnect with the rest of the distribution system constitutes a barrier to entry the ability of some firms with a strategic interest in preventing entry to do so is a potential concern going forward. In other words, market power.

Problem solutions, lessons from other markets, gate keeping and leveraging, accessing competition, government and private markets. Now, Hawaii you have heard about before. We have done studies in Hawaii. Hawaii is a small island, California is a bigger island. The issues are very similar in both cases. Access to refiners only, local manufacturers is a problem in every island.

The island continent of Australia I am working on that right now, and I've worked on it in the past. That one is totally upside down that has integrated major companies versus independence and hyper markets.

Seven years ago, Australia -- the independent sector was screaming because of too much control by the majors. Independent terminals were built, flow started to go into Hawaii. The opposite happened, Exxon Mobile shut down a refinery, and the majors started crying to the government.

The key is the flow into the market as Dr. Verleger points out, you have to look in terms of coming in from the outside. This particular Hawaii study, this is when the independent terminal opened, and this is when prices started to become more related to what we call import parody.

So, what we are really searching for in California is import parody. Hawaii has put on price caps. We are not condoning that, we are against price caps, but I started thinking of price caps as "implied permission" because everyone whom we interviewed in Hawaii, and we interviewed everybody in the market, did say that once price caps were enforced, everybody would go to the caps. They would become floors.

We did a little bit of checking. This

is one market where we found a price cap in Nova Scotia -- where was this, St. Johns. The price cap does become the actual price. So, what do we care in California. We don't have price caps. I say, yes, we do. We have OPIS. It is permission, implied permission to go there. That is the number you can go to.

Without full import terminal access, pipeline trade is restricted in California. Pipeline trade defines the OPIS spot price. This is something I want you guys to tear apart because I hope I am wrong about this. Without full import terminal access, pipeline trade is restricted.

Pipeline trade defines OPIS spot price, okay? I hope I am wrong. OPIS spot defines the unbranded rack. The unbranded rack sets the retail price throughout the state, and the spot rise is highly susceptible to -- that is not a good word, but -- is Watson in a choke point, or isn't it?

We know Watson is important because Dr. Williams showed us that is the beginning of the distribution system. It is restricted if access is restricted. It is a choke point if the spot market is driven by the pipeline transactions. It is a choke point if leveraging is systemically embedded. I don't know if it is, but let's talk about this, this afternoon.

It is a choke point if seller's option enables the short squeeze. Oh, I've got that backwards, buyer's option. Sorry about that.

The leveraging is a question of using a nickel to make a million. Purchase a spot pipeline at 25,000 barrel, the street goes up a million barrels a day because that happen or doesn't it happen. We are here to ask questions.

Who is the ref, the public, the congressman, the AG's office, who is the ref? Do we need a ref? So, the price spike components, the short covering on the pipeline raises the OPIS price. OPIS becomes the unbranded rack. The rack is transferred to retail, wholesale squeeze subsides with delayed imports. Imports come later. Retail price lingers for billions. We need a ref. If it broken, fix it. Maybe it is, maybe it isn't. That is what we are here to talk about.

So summary, the retail gas price is driven higher by spot shortages. Projects are delayed for years. Uni Cal patent is a problem.

We all know that is a problem. That is another issue all together, but related. We expect more problems during the driving seasons ahead. We are right now in a non-driving season and we are having a price spike. We are going into high vapor pressure season, and we should be going down in price traditionally speaking.

We stood here last February and said this would happen, and it is happening. These solutions I reserve the right to withdraw them. I didn't pull out the slide fast enough. This is early stuff.

We know we need to have someone to overcome the Nimby resistant to infrastructure projects at the local level because the good of the entire state.

Here is one I think is really important. I call it measuring how deep the moat is. When CARB comes up with new specs, we are not just talking about how much it costs to refine and produce that barrel, we are talking about how deep of a moat and how wide of a moat we are building around California by virtue of limiting other supply points.

Energy affiliate rules. Should we

examine these, is there a problem with embedded traders inside major integrated companies, or is there not a problem. If I am a trader and sitting inside Exxon Mobile, I am a global trader and I go out and buy the pipe -- if I do that as an independent trader, there is no problem. I don't affect anything downstream. I have no secondary advantage as a corporation or as a company.

I went through that very fast. Thank you for your time, and we will raise the questions this afternoon.

COMMISSIONER BOYD: Thank you. You did raise a lot of questions for this afternoon, and I'll save them for that time.

We have one last speaker this morning before we break for lunch. Tim Hamilton. We will let everybody fuel up at lunch and come back for what looks like a very spirited panel discussion hopefully.

MR. HAMILTON: My name is Tim Hamilton. I am a petroleum industry consultant who works with consumer groups and small business trade associations including the Automotive Trade Organization in California.

I have been in the petroleum business

since 1974, and I am going to try show in somewhat simplistic fashion how a very complicated industry works at not the economic level or the review level, but at the service station level, the way it actually functions.

I started in the business in 1974, and I was in the first gas line, and I've been there ever since. It has gotten much difference as time went on.

Everybody knows we get our gasoline through the Western United States, and the gasoline comes in, the crude comes in, we build it in refineries, and we ship it like a pipeline. It is an irrigation system like a farm, that is all it is. Strategically down the pipeline is truck loading terminals and they take off and they supply the gasoline stations.

What happens with the gasoline is that as it is in the terminal, it is loaded into a truck. We've gone to basically fungible generic gasoline. The components of the gasoline are blended and they are stored by many companies in the same common Kinder Morgan storage tanks as an example.

This is a very general review. There is

always wrinkles and differences, but I will try to stay as factually accurate, but remember general. So, when the truck pulls up, it takes out its card and swipes it just like you do at a card reader. That tells the computer it is Arco gasoline or Chevron gasoline, or whatever.

They draw that fuel out of there, charge their account, and at the last minute like paint going into a paint to make it color, in goes the Chevron additive or in goes the Arco additive, and there is one fellow from BP says, we have our witch doctor do a dance on the top of the truck, and that makes it BP gas, and it takes off and it heads out.

We hit branded service stations, and I also have the problem with being on a Mackintosh and as Brian helped me, we lost our unbranded station which was over in the left hand corner which I wanted to have there unfortunately.

Anyway, then we go out and we price our gasoline. The typical wholesale classes of trade that we deal with in a business today don't resemble what we hear here today. To the guy that runs the service station and delivers the gasoline, the world that we are hearing today is something that he doesn't even understand or see. He doesn't understand it because that is not what he visions.

What we see today when you go supply a gasoline station is that you have wholesalers that are refiners with their direct delivery systems where they deliver the gas to the station and control the sale.

We have refiner brand jobber distributor who in certain geographical regions, they assign that responsibility on to them and they are an independent middle man so to speak, and they line up the service station account.

We have a jobber who is an unbranded jobber who moves from one refiner to another or under contract to get the fuel generically and sell it to commercial accounts in unbranded stations.

Then we have the import trader. The importer trader and refiner basically is what supplies the distributors and the direct deliverer. Now I don't know what the number is, but probably 99.99 percent of the identities that buy and sell gasoline in the State of California don't trade it on the futures, don't hedge, don't buy, don't import. They go to the rack or they get delivered directly.

One of the differences in this part of the country in California versus the rest of the west and the rest of the nation is that we are prominently in the State of California DTW direct delivered by refiners, the service stations are.

This causes problems, problems in analysis especially. If you go and pull OPIS and it is a controversy with the CEC's posting, if you go pull OPIS or the spot price and the news media and Liz over here runs the story about how wholesale costs went down, the local service station deeder's wholesale cost could have gone up that same day. He doesn't see the spot, he sees the DTW, or he sees the branded rack.

Retail outlets basically are branded under refiner trademark, they are a private label by chain retailers, they are small operators at one or two stores are totally unbranded, and then you have the hyper markets such as Costco, Safeway, and so on.

When you get into the branded station that you see, why they will all look the same as you drive by, those branded stations can be broken into two categories when the refiner owns the real estate or controls the real estate and when they don't.

The refiners will salary or company operate stations or they directly control them with salaried staff, set the price and so on. They will use a fee or a commissioned agent who may run the convenience store for them and get paid a commission, but the refiner still controls the retail price.

They will use a lessee dealer where they will lease it to a franchise dealer who is an independent business man technically free to set his own retail price, but indirectly, which I will show you later, greatly controlled by the refiner as well.

Then you have the contractor open dealer, that is the guy that owns his own facility and is under a direct supplied contract with the oil company exclusively in a non-negotiated contract. He has to buy all of his product from them for a certain period of years.

Then you go to the geographical area where they have dropped the direct delivery and they do the branded jobber and similarly the same thing occurs.

The branded contracts can grant refiners significant control. In addition to their company operated retail outlet or fee operated where they directly set the retail price, the contracts today that the retailers sign have a non-negotiable wholesale price set at the sole discretion of the refiner. They directly or indirectly control the retail price in that manner. Arbitrary geographical boundary lines are set up where if you are in jobber territory, as an example, a Chevron dealer in San Diego can only buy gasoline from Chevron direct and not from a Chevron jobber because they won't let them compete between them.

They limit competition, these branded contracts do, from other refiners with real estate supply options up to ten years in length. In other words, as an example, one of the contracts on my desk today from Company A is a gentleman will brand his station with this company. They will give him a three year branded supply contract. In return, he must pay $150,000 to make the station look like their company likes it to look. He has to give them a ten year right of first refusal on the real estate. He can't sell it, he can't leave it, he can't put a sign in the window without their permission. He can't process a bank card, he can't sell a product without their review.

In essence, while he is technically an independent merchant, these contracts nearly have gotten to the point where if you are in the gasoline business with a branded contract, you are nearly salaried manager because the controls that are indirect are so great.

The differences in pump prices that we see in the dispute between geographical areas -- I started back in 1988 was the first spike with the federal trade commission and a congressman named Bates out of San Diego. They took the OPIS rack prices, the FTC did, and compared the rack prices for wholesalers between Los Angeles and San Diego and saw that they were within a penny of each other. That was the only price they had, so they assumed that the $0.20 higher price so to speak was retailer margins and demanded an investigation into gouging by the retailers.

We had to go in and show them that the retailers were paying actually more than a differential and a higher wholesale price. The difference was the wholesale DTW being charged by the companies, which were ten times higher than a freight differential on the pipeline down in San Diego.

The wholesale prices can vary from truckloading terminal to truckloading terminal, from California to the rest of the country, and inside a truck loading terminal such as Colton -- I am using Colton because we keep using that as an example. Exxon Mobile had a station that was operated by a friend of mine in the shadows of Colton. He could see the truck load almost, and he paid $0.15 a gallon more for Mobile gasoline than the Mobile dealer delivered from the same terminal 20 miles away.

I've documented these examples as high as Lone Pine to Modesto, Arco AM/PM to Arco AM/PM at 46.2 difference in wholesale price, same gas, same truck, same day.

A lot of times the wholesale prices are the result or the cause are directly tied to the differences in one geographical area for the other.

Sometimes that can be class of trade differences, and sometimes it can be zone pricing as I have just described.

Accusations of collusion or price fixing. I have been involved since 1980 with these, and to my knowledge there has never been since the MDL-150 cases any documented evidences of collusion or price fixing as people think of it that they cross the white line under anti-trust laws.

The consumer goes to work and drives by a station, sees all the stations in his neighborhood at $2.05, comes back that night and sees them at $2.10. He thinks it is obvious price collusion has gotten underway.

There are two types of collusion, tacit and direct. The industry talks every day with those complicated charts that you saw. We talk clearly and precisely. The best way I can tell you is this, you've got a shell station, I've got a Chevron station. I go to work by 8:00 in the morning and I look up at $2.05 and I see you take out the ladder and go to $2.10. I sit there and see that, and I know your cost doesn't change.

So, I watch it, and at noon I go out and I go from $2.05 to $2.07. At 1:00, you come out and come back down to $2.07. Now, you told me you wanted to go up, and I said okay, not $0.05 because they will buy where they work instead of buy at home.

We had the clearest most precise discussion that we could ever have, but we did not meet in the middle of the road. So, we didn't breach anti-trust laws.

These wholesaling changes that you see at rack and one of the things I want to encourage the CEC about is I've worked with your staff on some of the new reporting situations that you are in, and data gathering. I sit on the EG's task force. The lack of knowing data for the economists and analysts to review is very important because your prices are not directly tied because the tail is wagging the dog when it comes to this spot thing.

Exporting gasoline, shorting the market place, closing down refineries, keeping tight supplies, in the old days, you had the oil companies keep adequate inventories. Storage is one thing, keeping flow is another. Often we see people count storage. They don't ever bother to go look to see the tank is only a quarter full.

If you take and close your inventories

down in the old days and did not have adequate inventories on hand to supply your stations and you had a refinery problem or a burp, you would run out of gas, and your competitors would eat your lunch.

Then we went to fungible generic fuels and we stored them all in the same tank. Then all of the sudden something happened. Traders came along. Never heard of that before. Spot market, what was that? We took and started selling paper, and you need to go look at how the paper market in barrels which has nothing to do with getting a car up and down a road is used as a strategic reserve. They sell the gasoline off and that allows them the ability to go get it and bring it back. It allows the whole industry as an old agopoly to go down to the bottom of their tanks.

When you look at the market power -- I'll quote them, an old agopoly, a classic old agopoly, what they said in Hawaii. When you get there you understand the lack of competition and high prices. It is not the market power of an individual. It is the market power of an old agopoly that benefits jointly together by the rise in price.

Exporting, limiting production, controlling the imports, purchasing the avails. When you have a short market, and I am going to go back to the class of trades, you have a branded company out here today that is insured it is going to sell its gasoline through the branded stations it's got. It can't go anywhere. You've got the private labels which we don't have enough of or very few of anymore. Arco occupied that nitch in the '80's and we all lost. Where do you go if you are an importer to sell gasoline in the State of California.

If you see that high price and you come running over here with your gas, who are you going to sell it to. Well, what happens is they will lower that unbranded rack price when your cargo comes in to those unbranded distributors. Down goes the spot. Now you get burnt and you don't bring it back unless they buy it and bring it themselves.

There is two types of imported gas, the ones that is imported by refiners with control and one that is outside the refiners control. Because outside the refiners control it goes out into the system instead of getting absorbed in theirs.

Today when you want to see the spot market jump, you know what happens? One of the refiners goes out and starts to buy the paper back. This happened in California. Look to Chevron MBP. When they try to go and buy that paper back, what happens then is that Costco's and the unbranded rack are tied to the spot by negotiations and by implied agreements that seem to exist in the pricing system.

So, Chevron and BP can go out hypothetically today, buy gasoline on the spot, up goes the spot, up goes the cost to the unbranded stations and the hyper marketers, and they have forced up, and then here comes the stations.

The gentleman mentioned the independents are driving the price. Hold it, the independent rack is what we refer to is driving the price. What party took the actions or inactions that caused that to jump? It is the human behavior. When you have these stations and your own company ops and you can control the retail at all your branded stations, and you can get the prices to manipulate like this, the refinery margins are there.

I was involved in an awful lot of

controversy over Bakersfield. I was one of them that was involved in sitting down with the insiders releasing the public documents. When you listen to people like me or you look at these charts, ignore it. Go get the documents, go see what I have seen, you will understand. The way you make the money in California is to short the customers needs. If you drop the ball real bad, you will make even more. They are all locked together by this system. I don't know whether you want to call it control for one company or control for an old agopoly, but it is control.

I don't know whether you want to call it management for profit or manipulation of inventories, the eye of the beholder. I appreciate being here. I hope that I can be of help to you.

COMMISSIONER BOYD: Thank you very much. All right, we have reached the end of the morning session. We will break for lunch for one hour, and welcome everybody back in a panel format to discuss that which we heard this morning and the differences of opinions and perhaps address some if not all of the questions that this staff has put to our panel members.

I thank everybody for this morning, and see you in one hour.

(Whereupon, at 12:35 p.m., the workshop was adjourned, to reconvene at 1:35 p.m., this same day.)

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AFTERNOON SESSION

1:48 p.m.

COMMISSIONER BOYD: I'd like to thank the members of the panel sitting up here for a very stimulating morning. I can't say that I feel any better about anything as a result thereof or any less confused.

COMMISSIONER PFANNENSTIEL: Is this on?

COMMISSIONER BOYD: It's on. You can't hear me? You have a green light, and you have nothing. I can be really loud, but I don't know about the rest of the folks. Is your system going to work?

COURT REPORTER: It is recording. Your system is not amplifying.

COMMISSIONER BOYD: All right. I'm going to take a shot at it.

UNIDENTIFIED SPEAKER: We've got Bill Taylor on the way. He should be here in a moment.

COMMISSIONER BOYD: Unless these people want dinner here tonight, I am going to move this along.

As I was saying, and maybe it is just good acoustics in the room, I keep thinking I hear myself feedback. Thank you to everybody this morning for a stimulating discussion. I am not sure I feel any better about anything or understand anything a lot better, we turned over a few rocks.

What I would like to do first is go back through the agenda or the order of the presenters this morning in this sitting around the table in this round table format and let everybody comment first on what they heard, and then we will come back to address the questions and any other free-flowing items that anyone wants to bring up.

If we would just in the same order of testimony this morning, I will call on folks and give them an opportunity to respond to what they heard with respect to what other folks said and any additional ideas they may have.

With that, that means Severin, you are first.

DR. BORENSTEIN: Thank you. I hate to do this, but I think I have to respond to what I think were personal attacks from Phil Verleger to the point of being rather unprofessional.

I think it really -- I've been attacked many times when people disagree with my economics, but I have not previously been called disingenuous. It's been suggested that I had some bias when I think it is pretty clear that we are not working for any side, but let me make a couple of comments that I think respond to the substance, which I think frankly is misguided.

Let me just say this clearly. There is no dispute and I suspect Phil would not dispute that there is scarcity in this market, and that some of the price increases are due to scarcity.

At the same time, there is no dispute and the numbers that were put up by Phil Verleger among others make it clear that the short run elasticity for demand is very small.

The simple economics done right suggest that those two factors combined mean that any firm that has a significant market share where 20 percent is certainly a significant market share, and we can disagree and I would dispute very strongly that market share is the right number rather than capacity, is going to have an incentive to restrict output in order to raise profits.

Now, whether they are actually doing that or not is a very complex analysis, and I have made it quite clear, one that we haven't done.

To simply dispute out of hand or to dismiss out of hand that these firms have an incentive to exercise market power I think is clearly at odds with the basic economics of this market. Unfortunately, although the conclusion was presented that firms with the market shares that were presented by Phil couldn't have an incentive to exercise market power, that is simply at odds with the basic economic analysis that one has.

That said, we make quite clear in our paper that we do not have the data and frankly are skeptical that one could do an analysis to separate the market power from the scarcity effects, but I am reminded of 1988 in the electricity industry, and this is one of the cases where the analogy is at when a number of the senior statesmen in the industry said, oh, don't worry about market power, that is under control. That is really not the right lens to view this industry in.

I think the failure to recognize the potential for market power makes it clear or ran us down a road to a very bad outcome. I think we really need to be aware of the incentives.

In the end, Phil's presentation appealed to basically non-economic behavior by the firms. That even though they were very smart guys down low in the firm optimizing production perfectly in order to increase output, they were not very smart guys up high in the firm optimizing output in order to maximize profits.

You know, my view is that they are all really smart guys, and that failing to recognize that we do at our own peril.

I think that is all I have to say for now.

COMMISSIONER BOYD: Phil, it just so happens that you are next on the list.

DR. VERLEGER: I was extremely disappointed with the paper because Severin has done some very good work in the past on for instance gasoline pass through.

He and Justine Hastings did a paper that I thought was less than exciting on gasoline marketing because essentially it was an examination of Arco's acquisition of, I think, not Tower, but another company in Southern California that ignored five years of very dramatic industrial change that came subsequently in particularly the hyper markets.

In part, my trouble with this paper is the fact that Severin is drawing electricity analogies, and in the case of electricity, we have an industry that is five years old maybe --

MR. BORENSTEIN: I made it quite clear in my presentation that --

DR. VERLEGER: -- but -- excuse me --

MR. BORENSTEIN: First of all, you factually made --

DR. VERLEGER: Now just --

MR. BORENSTEIN: -- the mistake that I didn't co-author the article with Justine Hastings. I mean, so you should sort of try to get basic facts right.

DR. VERLEGER: Justine, when we testified before Senator Levin, you weren't there, said you were a co-author, so.

MR. BORENSTEIN: I will check that, but I find that inconceivable.

DR. VERLEGER: The oil industry has been around 30, dealing with these things for 30 or 40 years versus five years for electricity. Electricity people made some serious mistakes.

The trading in oil dates back, you can

date it back I suppose (indiscernible) would date it back to 1920, but certainly I have been worrying about it and seeing active trading since 1980. I was on the committee, I had just left Yale, that offered the first futures market contract in crude.

One of the problems one has is that wrong ideas and bad economic analysis have dominated our energy policy. It took us ten years to get out of price controls, and I was part of the removal of price controls, and some very good economists like Fred Conn really resisted us, and we had some problems.

I found the conjecture in this to be very troubling, in particular, I work the point up of people working in the companies. If you go back and you read the trial record of MDL-150, something I know about because my father was Exxon's attorney, and it is the only anti-trust lawsuit where Exxon prevailed and companies went it went to trial prevailed. The procedure, the interest in long run profit maximization and the behaviors of these companies has been such, although they are attacked and they have been attacked for thirty years for doing these things, are the evidence just hasn't been introduced or been found.

Because, in fact, it hasn't happened at least in the United States to the proof -- you go through -- the only place it came close was in the FTC's midwestern gasoline investigation where they had to use their subpoena rights, where they went through and talked to the companies, and they found one company that cut sales, and there was some question as to why they did that.

This was unilateral action. Severin is quite right on scarcity and low price elasticities could lead to this. In fact, given the fact -- for one thing, the down side to these companies for taking one of the actions that he has described if it gets disclosed are just enormous.

Enormous not just in California, but across the board. If you want to pick an analogy that's totally different, look at the mutual fund business where the kick backs came back and it has closed a couple of mutual funds.

Adverse publicity is a huge disincentive. Companies have worked very hard to keep supply there. The suggestion that at the top they would take this. It is a difference. The electricity generation I've seen from reading depositions and so on was like a bunch of cowboys.

I think Severin is absolutely right and the Borenstein papers on market power and electricity or Paul Joscow's papers were good. It is very different, and the trouble is that once you get one of these ideas out, they become self serving and they just get picked up and get carried on and carried on.

My concern is getting investment as is yours. What I have seen is you look around the world and you see people say well, that is becoming a place where just investing and trading is not a place I want to be. I think that academic, one, the sentences I presume they would rewrite so there weren't so many double negatives makes it -- it comes very close to the kinds of things we saw in the 50's on the anti-communism side. I just was extremely --

MR. BORENSTEIN: Oh God. Jesus, Phil, let's keep it under control here.

DR. VERLEGER: I don't think it's -- Severin, you haven't been fighting these battles.

MR. BORENSTEIN: Come on. Would you just read the top sentence there, and I apologize for writing above a fourth grade level, Phil, but I think you can still understand it.

DR. VERLEGER: Severin, most of your papers -- never mind.

MR. COVI: This might be a good time to get Drew Laughlin on the line.

COMMISSIONER BOYD: Can you get Drew Laughlin on the line?

MR. COVI: Can we Bill?

COMMISSIONER BOYD: Everybody can count to ten while we bring in an outsider to listen, and then Jeffrey in the rotation of things, you are next.

MR. COVI: Drew, hi, this Brian. We are on the PA system here at the workshop. Why don't you just give like a very very brief introduction, and I would advise the audience. Drew was originally invited to be a presenter because of his expertise on the pipelines. He wasn't able to join us today, but he is able to participate in this panel discussion from Houston over the telephone. Go ahead, Drew.

MR. LAUGHLIN: Brian, thanks for having me joining in. I am sorry I was not able to get out there for the week, and I was able to assist

Greg Haggquist at least over the last few months in our presentations. We met out there, and I believe Gregg has made the presentation this morning on pretty much what we have been presenting over the last six months, which is the changes we see and the problems we see in the California infrastructure which I think Gregg has probably gone over this morning, although I wasn't able to listen in.

The main points that I have always stressed with the CEC is still the utilization of very limited import infrastructure assets, especially docks and limited tanks is still a problem. It isn't getting any better as we have been discussing this all year, permitting is not getting any faster, the system isn't opening up.

We still have major constrictions on the system, and we are still lacking new players and new supply. My basic schitck is still that it is a strategic supply that California lacks. The ability just to store strategic gasoline, and this just isn't the volume of gasoline. This is a quantity of a high quality product such as alkylate. You have continuous problems out there with quantity and quality problems.

For instance, California or excuse me Arizona's problem last year was a quality issue. You couldn't change quickly to an Arizona quality because refiners were making as much California material as the market required and couldn't move quickly because there wasn't enough strategic product out there like alkylate or something that could change CARB even into an AZBOB or a Nevada type spec if necessary.

That continues to be the main problem and the inability of outside players, whether it is refiners from the Gulf Coast that aren't participants our there or traders, importers, blenders still have problems getting into the California market.

That is basically what I would have said if I was there this morning with Gregg.

COMMISSIONER BOYD: Thank you, Drew, this is Jim Boyd. Good to have you on the line. What we are doing right now is going around the table of this morning's speakers to just let them reflect on what the other speakers said, and you are right, Greg did give us a lengthy presentation in world record time, and we are going to need to revisit it a little bit to totally absorb it, so I am glad you could join us now.

We just had a little in the order of presentations, Severin gave us his report. Phil Verleger his, and Jeffrey Williams, and Gregg, and Tim Hamilton. We are just going down that list. We just got passed Severin and Phil barely when we got you on the phone. So, if you want to listen in, we will finish the rotation, and then we will open it up to the whole panel to a more broad discussion of the questions, including the questions that were put to all the panelists and any other issues that any of us might bring up.

So, thank you for joining us and hang in there.

MR. LAUGHLIN: Okay, I'll be here all day.

COMMISSIONER BOYD: All right, Dr. Williams, it was your turn in rotation.

DR. WILLIAMS: I'd like to make a broader point that hasn't really been said except perhaps indirectly when we were talking about long run futures prices.

We focused on California, but this is a world petroleum market, and there is market power in that industry. Everybody recognizes it. OPEC is an unusual force here. So, all of our analysis of what goes on in California presupposes some effective OPEC, and that makes it very hard to figure out what's the effective OPEC versus the effect of more local conditions.

I'll use that in one example using the current futures prices. I think it really does matter, and I agree with those that have said this already, that the long run futures price is now gone up a lot compared to its historical average. That is telling us something.

We are also in a condition and have been for over a year or two of extreme backwardation. Let's reflect on what that is a market signal about. It says, don't hold inventories. If you look at heating oil, if you look at gasoline, repeatedly the market signal is to don't hold inventories, so a discussion at California context of why we see so few inventories, well, that is what we should be seeing. If we don't think about that broader picture, I think we end up having some misperceptions of what is going on in California.

COMMISSIONER BOYD: Jeffrey, would you do me a favor for those in the audience who don't live with this on a daily basis, and I am thinking particularly of members of the press. Define backwardation.

DR. WILLIAMS: In the grain markets, it is called an inverse carrying charge. So, that doesn't help either, right? Every market has its own language. It is simple is a statement that if you are trying to buy gasoline or wheat right now, it costs more if it is delivered immediately than if you get it six months from now.

The backwardation, that term is a British term from the 17th Century by the way comes from having a tightness now, which could be from natural causes, there is a small crop makes a backwardation in wheat, but it can also be the effective market power.

It could be that as time progresses, the price goes up even more and everybody who said gee, the price will fall is wrong, but it is a market prediction that the price is likely to go down that conditions are more flexible in the future. That is a market signal to hold fewer inventories. You can buy something later, why hold it. That is a very important signal.

COMMISSIONER BOYD: Thank you. I

thought that was important to have it defined because there is a lot of discussion about inventories or the ability to hold inventories or why we don't have inventories, and some people may think it is because people aren't building it or they are purposefully withholding it from the market, but it is more tied to the operation of the market in total, and you helped explain that.

DR. WILLIAMS: Yes.

COMMISSIONER BOYD: I interrupted you.

DR. WILLIAMS: I was going to make one more point that comes a bit from OPEC, but it's just the nature of these markets. They are highly variable. Prices go up and down a lot. That is the important thing to recognize because of the way we then have some methodology about that.

It is likely whatever the commodity, if you think about the various grades and the various locations and the various times, some price will be odd as measured in some objective way because things are staying stable. That means we are very likely to end up with an anecdote that says gee, this odd price here, I don't understand this. Something is very funny.

I bet we could interview a lot of wheat

farmers are really puzzled why their local grain elevator at harvest time had such a low price. Well, maybe it didn't the year before or something like that.

So, I am really nervous about an anecdote as a way of saying what the average is because I think those anecdotes much more often find the extremes and the extremes are a natural part of this industry anyway. They are puzzling, they are interesting, but they don't represent the average condition.

COMMISSIONER BOYD: Thank you. Gregg, you were next.

MR. HAGGQUIST: Thank you. Just a couple of things I reread the sentence that Severin (inaudible).

COURT REPORTER: I'm sorry.

MR. HAGGQUIST: Can you hear me? Did you hear me?

COURT REPORTER: No.

MR. HAGGQUIST: I was saying -- no, no, it has nothing to do about you. In the art of writing, if it has anything to do with you, it is not the art of writing. It has to cut the umbilical cord and has to stay out there in the world of writing, and the sentence stands as a good sentence in the sense that it does slow the reader down and cause the reader to think, you know, and it is an strategm. If you write sentences according to your grammar check on the computer, you will write vanilla ice cream at all times and no one will ever have a second thought of anything you ever said.

Secondly, I think there is quite a significant behavioral parallel between electricity markets and gasoline. When I ran the last company I ran, we were for years petroleum traders. We entered into the electricity trading world because we thought it was going to be a big market, and we thought we could do well at it.

I went to Electricity 101 seminar in Houston knowing nothing about electricity. I remember meeting these smart electrical engineer capable people at cocktail parties and I would give them the business card and they say, what is this company. I would say we are oil traders, and they would say you are coming into electricity, won't that be a long learning curve. I said no, sir, you have a long learning curve.

That is what happened, the traders knew

what would happen in the electricity industry, so it is a behavioral question. I believe what Severin Borenstein is pointing out is that a condition exists so that certain behaviors can take place and be harmful to the general good, not by any deliberate scheming, but by incentives and really good trading. We will talk about that as the day goes on.

The other thing I wanted to point out was that I had not had the good luck of meeting Tim Hamilton before, but I thought your presentation was very very good, and I think that the second half of what I was saying, and I said too much, but if I just cut it in half and just delivered the last half of it, and you were to dovetail that with what you were saying, I do believe that -- and what Jeffrey Williams points out, all these questions can be explored in a concrete way to everybody's benefit.

Thank you.

COMMISSIONER BOYD: Thank you. Tim, I believe it is Hamilton is next.

MR. HAMILTON: First off, I want to say that was the most interesting round of dueling economists I have seen in a while. After serving with both of these guys, I always laugh because with all respect to both of them, I remember telling Phil when he came in, I said I remember when his Wall Street Journal he used to refer to me I would go from raving lunatic to clairvoyant genius.

I remember when he had raving lunatic by predicting oil would go to $50 a barrel and guess what, it did.

I don't deal in a world of data. I deal in a world of business. I have a high school diploma from what one refiner tried to assert in court was from a secondary school. I have only been self-employed since I was 12, started five businesses and employed hundreds of people and never been on a government payroll in my life nor a corporate one.

I don't do the talk, I do the walk. I deal with people who do just that. They sometimes as I said, don't recognize talk. It all comes together when you recognize how this marketplace works. (Indiscernible.) You short the market, your prices go up. Severin, if there is a shortfall in the market. Now you could argue because environmental rules and regulations or you could mark it as because they shipped it to Australia in May of this year, March of this year for $0.50 a gallon, and the market place shorted there.

There is no California citizen entitled to a single drop of gasoline or diesel at any price by law, unless it takes it to Act 4. The public thinks of it as a utility, and we are allocating these resources by price. That is the whole system. They play it like a tune. You raise the price, slow the consumption down to meet the available barrels. It is not as complicated as you think. They count the trucks, they go to Imperial Valley, they say how many trucks came out today, 110. How much fuel went in? 100. Raise the price. They allocate the fuel by what they have available.

We have infrastructure problems. We have a lack of supply being available for us with our own refineries, possibly more going down with Bakersfield. It doesn't take an action of an individual, it takes an inaction.

Example. In the old days, I'd go down and I might get some Chinese gas. It would come around through the imported unbranded marketers and in through Wickland or whatever. We had refiners unfairly using, but as an example, BP/Amaco/Arco.

The mergers. Did it affect, I don't quite buy Phil's argument about the refineries in my state where I come from, but let's talk about the mergers. Conflicts of interest that weren't recognized by anti-trust law, fights with the Federal Trade Commission that I went through. What we found in the mid-west, which I was criticized for, was I first published a report that said that it withheld product.

In the mid-west run up, I was one of the first to come out with a report for consumer group that said it could have been avoided, they withheld product. That was later subsequently confirmed.

If you have a shortfall of product in the west in the old days and you got the arbitrage up and it was over the cost of transportation, the fuel would come around, it would come into ports, it could be sold through marketing system of unbranded stations and all this type of stuff, and down would come the price.

Now, who would do that? In those days,

we had say Amaco refineries that didn't do business out here. They might bring the fuel around. We had Singapore refineries with BP or over in China. It would come over.

Then you put together BP/Amaco/Arco. Now, the BP refinery manager is not going to bring in fuel and undermine the Arco refinery margins of $0.70 a barrel or $0.70 a gallon that we had here.

Massive conflicts of interest with the economic analysis of the people at the Federal Trade Commission refused to admit, refused to recognize from everything I could tell after hours of discussion and communications with them.

When we had the 1996 run up, in 1997 there was a price investigation. There wasn't a price investigation, but a price spike, and I published what was called a parade of ships. All the ships took off, the tanker Kenneth Derr named after the CEO of Chevron loaded with a conventional fuel left San Diego Harbor. I was a source of Orange County recently too, and the fuel prices went spiking up because that gasoline took off and left.

It is not against the law, and it was probably a good business decision, and they all did it. So, if the cure is more infrastructure and the cure is more refineries, but to put those infrastructures in and make those investments, we are going to turn to the oil companies who do business here today, and those investments would cause the profits to go down, not up. You could wave every environmental law known to mankind, in my years of experience in the business says I am not going to take money out of my pocket and invest it because my profits will go down. I don't care.

You know, when it comes to bad press, I don't think the oil companies have been too reluctant to take that share in hell if you give me $3 billion more a year out of California, you'd call me names. I'll take all the heat you want.

The economic reality of what we have today is that it is not in the industry's best interest to adequately fulfill our needs because it would cause profits to fall. What you do about it is going to be an interesting question because I am going to get on a plane and fly out of here.

COMMISSIONER BOYD: Have you got any suggestions before you leave?

MR. HAMILTON: Yeah, I've got a lot of

them. One of them is you need to go down and look at the tail that wags the dog. Phil talked about -- I worked with Justine Hastings for a long time, and one of the things that we learned on the AG task force was that thrifty -- you have to understand all the time I was actively in the gasoline business, I was a branded franchisee, and my enemy was the cut rate chain retailer who kept cutting the price down the road from me.

I have spent since 1985 trying to explain to people that if you do not watch and control the retail marketing and you let the majors control it, and you limit those people, you are going to lose big time. And we did.

Atlantic Richfield -- the perigees here or the impressions in people's minds, the best non-data analysis or non-scientific approach is that Arco is always the cheapest price in town. Another way of saying it is it is the worst place you can buy a gallon of gas in any state of union that Atlantic Richfield does business in. It is the most highest price.

The cheapest is the most expensive. Understand that the control of the stations with Thrifty was a willing customer for Nesty. They testified they would bring fuel around here if they could sell it, but they can't bring it around if all the stations are tied up on exclusive contracts. They don't have anybody to sell it to because then they move those class trade prices and you lose your (indiscernible).

Count the barrels. Go out and count the wet barrels. No matter what you do, the key is the wet barrels. Not the paper, not the trader, unless the trader is bringing you wet barrels. I don't know how you are going to get those supplies here and as far as the strategic reserve is concerned, I seem to disagree with everybody over that because if I had my way, I'd go out and put an excess profit tax. I'd not let them have that $0.70 gallon. I would build me the biggest storage tanks you ever saw, and I'd fill it up with gas.

The minute those sons of a guns started to fail to meet the needs of the consumer, I would turn that crap loose. It would flood those unbranded racks, and you could not drive the unbranded independent price up to bring the majors up with it. I know that all the good economists will argue that is counter productive and everything, but I am going to tell you something, if I knew I was going to manipulate the market place and it was going to cause my profits to go down, I would stop manipulating it.

That is just the way I would do it, and to each his own. I guess what I am saying is, you are not going to be able to be very friendly to those who are profiting by the shortfall of product. You will not be successful.

COMMISSIONER BOYD: Thank you. Interestingly enough, during the morning session, I wrote down phrases that were used multiple times, and tail wagging the dog won the contest for most references that I wanted to see that there is additional discussion on this afternoon.

I think perhaps it has started, so I guess as we now begin the true round table, I'd like to understand that better. I guess the other thing I want to say is I have a lot of respect for Severin and Phil as economists. I've studied and read their materials for quite some time. I must confess I have read Phil's longer only because when I was over at the ARB for 20 years, you know, he was writing stuff that he paid more attention to. Severin hadn't come on the scene for me just yet.

When I got thrown into the electricity world, I caught up real fast. I have immense respect for both of them, and a little frankly surprised by the exchange, and maybe we can put that behind us. When I read and reread Severin's report, while Severin left some rocks to be turned over, I must confess and maybe I read it wrong, Severin, but I walked away from our mutual testimony in the legislature and from my reading saying, well, yeah, it is really hard to find that there is any criminal market power going on there and it makes you wonder where you should put your emphasis in doing things next.

Phil, maybe you were defending against something that really wasn't there as much. I am not quite sure. In any event, let's move on with the afternoon's discussion and have a little more free ranging discussion of A) the questions we put out there, and if you didn't like those, why branch off into anything else that might interest you.

I would like Commissioner Pfannenstiel if she has any points she would like to see touched upon or emphasized or has any questions before I just throw the microphone open. I am not throwing any raw meat out there either.

COMMISSIONER PFANNENSTIEL: As a matter of fact, there are two points that I heard this morning that I would like to have -- I think they will both get addressed some how this afternoon. In fact, we heard it clarified early this afternoon, that according to Severin, there seems to be an incentive at least for market power, and yet on the other hand there seems to be a disincentive to actually use that market power.

In the discussion this morning, it seemed like people were saying that there really isn't any way of testing that. There really isn't any way of analytically demonstrating whether in fact market power has been used. I would sort of like to be developed a little bit because if that is the case we may then need to frame things differently.

A second area that I felt was interesting is that we heard from I think all of the morning speakers talked about various short term events, sometimes actual strategies, sometimes just exogenous events that would drive prices up.

I kept listening for comparable that might be sending prices the other way, and in fact what we hear and I guess it is pretty logical is that prices are pretty sticky going down. It is harder to get them down once they have gotten up there.

What we have talked about in terms of increasing the infrastructure, the long term fundamental industry response, but are there shorter term events we should be looking for or precipitating that might help in the other direction.

COMMISSIONER BOYD: A couple of other quick comments. Phil, historically when you and I have been in the same forum, you have been pretty tough on OPEC and have spoken at length about the market power they exert. I didn't hear much of that today, and you may or may not want to say something more when you get the microphone.

DR. VERLEGER: Do we have all day?

COMMISSIONER BOYD: Another issue that I think is very relevant is kind of the general question, will they make the investment, i.e. in infrastructure. You've heard my bias that goes all the way back to the mid '90's when I was wearing a different hat, that I'd have to really be convinced, and I still remain unconvinced that back in the days when we really didn't have much of a chilling message coming out of California, other than we wanted cleaner burning gasoline and it cost a little bit more, until the 2 by 4 was applied last year.

I don't think government was sending messages that there were disincentives in this state to making investment, but yet we never saw it being made. I can be convinced otherwise. I've always felt that I was fairly open to everything. I am still open to pipelines and strategic fuels reserves if the world changes to the point that there are good things to do. At the time we looked at it, we didn't think so.

We had an electricity crisis. The American people, Californians, have been really respond well to emergencies. We haven't quite declared an emergency in the gasoline arena, although I don't know perhaps why not, except politically it is not very tasteful.

Government can respond and help people make investment, i.e. facilitate the environment for capital improvements, as was done with building power plants. If we really ever truly felt and anybody said there was an emergency, we need to build more refineries in this state, but it has never been said. It has always been said to me that it is a world market, don't worry about it.

Lastly, we in government who think we serve the people, and yes I have been on the government dole most of my life, feel like we work for the people and try to represent them. One of the problems we have is the optics of situations, and in spite of strongly held feelings that most people are good people, the people (a) see the price of gasoline real high, (b) people try to tell them it is supply and demand and it is scarce, and (c) they read all the time that the oil companies are making record profits.

Now I know from studying the profits aren't always that good, and there are lots of lean years and lots of good years, but we live in a world of optics see gee, the oil companies are making unconscionable profits right now and we are paying through the nose for our gasoline. Something is wrong.

That is why we have lots of discussions

and legislatures have lots of hearings.

The last thing I will say about why we keep persisting in addressing this subject, turning over rocks, and I'm not convinced that there is anything there, but in our responsibility to the people of this state is you've always got to peak around the corner in my mind at the dark side.

I don't think that was done, but I didn't help design the electrical system. I don't want to fault those people, but something sure as heck was wrong in this state, and I think they forgot to lock some people up in a room and say, okay, go to the dark side and figure out how you can beat this system, and then we will design into the final structure mechanisms to avoid that.

I think in this area, we keep looking, and there is a general public perception that there is a real dark side. The reason we are holding workshops like this is to see if there really is or isn't, and have people convince of one or the other.

I remain prejudiced or biased to the point that we are going to pay hell trying to ever satisfy the California public's demand for conventional gasoline, and thus, you hear me talk about CAFE standards and alternative fuels more and more. I also buy into the idea that we need to absolutely optimize, maximize our ability to deliver conventional fuel for a long long time while we transition to something else. That is kind of where I approach the situation today after sitting through lots of these sessions, but we have all afternoon to continue the discussion. I am quite hoping to changing my point of view on some of these things.

With that, I'd like to just have anybody grab the mike and say anything they might want to. If nothing else, people address the questions that the poor staff spent a lot of time thinking were important to this forum. Severin.

MR. BORENSTEIN: It is a long list, and I am going to try to run through them fairly quickly.

Commissioner Pfannenstiel asked what would send the prices down. Actually, the prices were down for 30 years. Refinery margins were extremely low, and the industry basically regretted their investments. So, we had a long run of down prices. I don't think that justifies market power, but I think these markets are really working away economists with a sophisticated understanding of the markets would expect.

They will go down. At some point, we will probably have over investment in capacity, probably not soon for California gasoline, but I think in the short and medium run, we are stuck where we are. I will come back to that when I talk about some solutions in a second.

Let me make one comment about oil that is sort of going to be out of the mainstream here. I think it is time that Californians and Americans stop whining about OPEC. The bumper sticker I like is the one that says what are our oil reserves doing underneath their country. It is their oil. These countries have the right, I think, to sell it to us or not sell it to us as we please. We have to recognize when it comes to dependence on oil from unstable and oppressive regimes, we are our own worst enemy.

We are the ones who have gotten ourselves into this situation and refuse to recognize the untenable political situation it puts us into. Yes, OPEC is running the the price up, and you would expect exactly that. It is not a very stable collusive agreement, and so if there is a hit to the market, it could unwind as it did in 1985 and 1999 because it unwinds pretty quickly, partly because of the revenue requirements. We enjoy those good times and we don't complain that they are over producing then.

There is a real issue about investment an infrastructure that I think Phil rightly pointed out that if you really send the signal that we are going to reduce consumption of your product and they are thinking of making a 30 year, 50 year investment in a multi-billion dollars of capital, boy, yeah, that is going to give them pause if they believe you.

My guess is that they don't. My guess is that they look backwards at all the jaw boning about reducing gasoline consumption and I suspect November 2 will matter to a significant extent on this about how serious we are about for instance CAFE standards.

Under either new administration, I suspect we are not going to make huge progress any time soon. It still is the case that almost everyone thinks that 30 years from now we are going to be an a different fuel regime. When you think about that, making a huge capital investment now has to pay off pretty quickly, not over 50 years because it is pretty clear that 50 years from now you are not going to be making good money with an oil refinery.

That means that the bar to make the investment is higher now, and that means that we are going to go through a period of pretty expensive gasoline. That, by the way, doesn't bother me. What bothers me is where the money is going because the refiners are making essentially scarcity rents, probably augmented by market power and no, I can't prove it, but I think that in some ways it is not relevant to most of the policy decisions. Though, there are some that I think it is critical, and I understand the difference.

The fact is that the price -- there is going to be a real tight market. When there is a tight market, the affect of a tax in the market is born by the sellers primarily, not by the buyers. This is basic economics of tax incidents.

Now is the time that California, if it were serious, would be implementing a significant gasoline tax. I know that no politician is going to say this, but let me augment it by saying now is the time they should be implementing a significant gasoline tax and reducing personal income tax for low income customers to offset it. This does not have to be a revenue enhancement on that. It could be to some extent, but the fact is we are now taxing personal income that is people working. We are giving disincentives to do things that we should be encouraging, and we are giving incentives to do things that we should be discouraging or at least recognizing the external costs of using.

Let me just cap this by saying Phil Verleger is nodding while I say this, so we are in agreement on some things. I really think that realistically do we really want to solve this problem? You are right, we are sort of nibbling around the edges with the discussion about exactly how much refiner capacity there is. There are real reasons not to invest. There are also market power reasons not to invest. The fact is that we face a future where -- that is a place where it is virtually impossible.

If you go to a refiner and say, look, we looked at your investment profile. You could make a positive net present value building a $5 billion refinery today, and they are going to say, yeah, you are assuming something 30 years out, and we are assuming something different, and you have no good argument to override us on that.

I think if we are really serious about this, we have implement policies that do reduce gasoline consumptions. The one that will work immediately is gas taxes. None of the others will. The fact is that raising CAFE standards I am for, I think it is a good idea. It will have an affect in 2012, but it really won't have an affect before then.

If we are serious about doing something, that's the solution. Just let me say one other thing then I will stop. It is not critical to everything to understand how much market power there is and how much scarcity there is. But it is critical sometimes to understand that both of them are present. Even if you don't fully understand.

Let me give you one example. One of the proposals I have been making for about five or six years now is a permit system for importing non-carb gasoline, and this of course is politically gone absolutely no where. It makes tremendous sense.

It basically say if we set a fee for bringing in non-carb gasoline, it would be a significant fee, one that clearly is above the spread necessary to cover carb production. During those super shortages, it would allow some relief, the funds from that would be taken and used to reduce pollution by buying back old cars.

If the spike is caused by market power, those funds will never exist. If the spike is caused because firms are withholding supply, their incentive will be to withhold supply up to but not above the point where you have a real shortage.

If the spike is caused by true scarcity, it will have a different effect, it will really -- there will be a real shortage, and there will be imports in order to offset it.

Those will have different effects. I think it is a good policy in either case, but I think it is important to understand exactly how it will play out differently.

COMMISSIONER BOYD: Commissioner Pfannenstiel.

COMMISSIONER PFANNENSTIEL: Yeah, I have a question on the gas tax on suggestion. We talked earlier about how low the price elasticity is. Wouldn't you need to raise or have an enormous tax in order to have the effect on consumption that you are looking for?

MR. BORENSTEIN: There's good news and bad news. The bad news is demand is very inelastic and the good news is that supply is very inelastic in this case. The reason is when you get into a scarcity situation, if you remember that curve with supply, the bad news is demand is very inelastic, but the good news is if you put a tax on it and can move supply down a bit or move demand down a bit, you will reduce the wholesale price quite a bit. That is the equivalent of saying that when you are in a situation with very steep supply, that is one of those real shortage situations, the incident of the tax, the tax will be born primarily by the sellers.

So, it is true that it won't drive the net price down or sorry gross of tax price down to consumers. They are going to pay a higher price. I think that is a price that actually recognizes all the bad negative externalities not just pollution, but coddling, Saudi Arabia recognizing the affect or our foreign policy throughout the world, etc.

The fact is that for the people who are truly harmed by that, I think it can be offset.

COMMISSIONER PFANNENSTIEL: But you're --

DR. VERLEGER: Can I --

COMMISSIONER PFANNENSTIEL: Let me just follow up and make sure I understand that. The point is that it won't really affect demand, but it will affect supply.

MR. BORENSTEIN: It will affect demand a bit, but you are right, most people will consume just a bit less gasoline. They will just end up paying more for it.

COMMISSIONER PFANNENSTIEL: Because gasoline prices as the whole reason for us being here have gone up tremendously in the past year, and that hasn't dampened demand.

MR. BORENSTEIN: Right. Actually, that's not true, actually.

COMMISSIONER PFANNENSTIEL: I guess the point that I am struggling with is this low elasticity, and you know when you are talking about demand not being very elastic, trying to figure out how much of an increase in price you need to dampen the demand or whether that has to be over a long period of time or how you get it, that dampening demand.

MR. BORENSTEIN: Yeah, and I think your intuition is right that inelastic demand makes this more costly program, although I would argue that if we offset it, you can still -- but even that said, I think when we are in these really tight market points, the inelastic supply is what drives it.

DR. VERLEGER: Jim, I want to chime in here and the duel has ended in one sense. I described the work that Houthakker and I did 30 years ago. It was done for the EPA, and the second half was to study the affect in 1973 of a $0.50 a gallon gasoline tax.

With rebating by essentially paying off the employee half of the social security tax, which works just as Severin would describe it because there is a cut off. I don't know where the cut off is today, but it is $80,000 or $90,000, so essentially you pay that back.

On a national basis, that neutralizes the GEP affect almost entirely. Now there are some localized problems. For my good deed, I got

John Sawhill fired because John Sawhill pushed the idea before Jerry Ford, but it was then and remains today a very good idea particularly because it does work its way down, and as Severin has pointed out, the incident falls on the oil exporting countries.

I think Tom Freedman last Thursday in the New York Times explained precisely why we want to do this when he described the U.S. current energy policy is leading is leave no bob behind. He continued and he said this is a policy that keeps on giving: Terrorism.

In terms of the international politics of it, we were closer to democracy in Iran in 1988 when Iran had to negotiate with the Paris Club because it had run out of money than we are today.

I think the Borenstein proposal on the fee for gasoline would actually be much better east of the Rockies if they would allow refiners to bring in gasoline that didn't meet the current sulphur specifications. We can blend on the east because that would have brought in gasoline and capped the escalation of gasoline prices and probably cut out about half of the price increase in crude oil we saw this spring.

What happened was new EPA standards, just good EPA standards require the reduction of sulphur. I think California is below 50 parts (indiscernible), it is 350 or so on the East Coast and coming down.

That gets me to the investment issue. Again, I am going to appeal to some of the things that Severin has talked about with the airlines. The oil refiners confront a situation similar to the airlines, the network airlines that are now going bankrupt in a different way.

The network airlines have seen the low cost carriers come in and where, for example, there was an opportunity to offer them a marginal incentive from the government or give it to a network carrier, it has gone to the small carrier.

Classic case in point is Frontier Airlines can fly from Denver to Washington's National Airport, United can't. Congress authorized one airline and they picked it.

What I see kind of as I study, and nobody has told me this in the behavior of the oil companies is a concern that any time there is an environmental regulation that goes in and the supply affect, they may well grant waivers to smaller companies, just as in the airline business.

Whereas as the major airlines, the network airlines, let me be precise, have continued to invest and try to compete with, what we are seeing in the case of a number of companies is kind of backing off on the investment and saying we are concerned about the waivers that are granted to smaller companies.

These companies have choices as to where they can put their investment and what you see is kind of moving out of these markets where the risk to the reoccurrence of expanding capacity are undercut.

That has been offset to a certain extent by producing countries moving in. Venezuela for instance with Citgo, but that is one explanation I think for why there has been less investment here on the West Coast than you might otherwise predict.

This is why when I was making my comment, I think the FTC's policy of preserving competition is basically a good one, but it is creating new competitors in the refining business where you may have to have to run a big refining business, you may have to have $5 billion in letters of credit to hold inventories. The banks may only extend $3 billion.

I follow Jeff's work and use Jeff's work a lot over the years, but the cost of credit is not easily integrated into kind of this inventory analysis. I will tell you there is one company on the East Coast, Primcore, that is now having to borrow oil from the strategic petroleum reserve because apparently they don't have the cash to carry the inventories.

Just today, they got another loan from the SPR. There may be some other reasons, it is not clear, but the capital costs of holding inventories at $50 a barrel are just so high.

You go back to the electricity thing, and I think it is not that different from the problems that Calpine had when the electricity price went way up and the natural gas price went up.

This feeling, this suspicion that the majors won't get treated exactly the same does influence the investment. I come back to the question you asked about OPEC, Commissioner Boyd, and it is a -- I think that we shouldn't whine about OPEC, I agree. I do think we should do something about OPEC.

Every country has a right to sell its oil, the volume of oil it wants. What the people neglect is Saudi Arabia is essentially coerced other countries into cutting production by threatening to dump oil on the market at periods of time. That, I think, is not good. Getting together and deciding what the right price is wrong.

Tim, even though he is a very well educated man, we know not to do that inside the United States, and we shouldn't. The Europeans don't allow it, and we shouldn't allow it any place.

MR. HAMILTON: A cartel is a cartel, and in a lot of the world, all productions starts in behaviors that would be they would be in jail in the United States.

That being said, one of the things that I have tried to do as a common sense factor is I did this with the Wall Street Journal and some of them where you talked about mega mergers and power. They said well look at synergies has given us this much money. I said how much money has it given you at Exxon Mobile.

Exxon Mobile admitted I believe taking this off the top of my head $500 million over an unknown period of time. I said okay, what if the market power give them in the form of higher gasoline prices using an inaccurate chart like a billion dollars in six months. You know my common sense tells me that if I was a bean counter sitting in Exxon Mobile in Houston, my motivation wouldn't be synergies at $500 million, it would be the $1 billion instantaneously. So, count the money.

When it comes to low inventories, understand that yeah low inventories cost you a lot of money for somebody like Primcore like you used as an example, but you take BP/Arco, it didn't cost them anymore to bring gas out of Anwar or oil out of Anwar, ship it down here necessarily, store it.

The only thing that went up was their paper asset values they charged themselves internally. So, they didn't go running to a bank.

When you get to the inventory structure and you get to these rules and regulations like CARB, understand how these affect companies differently. Small refineries versus big refiners which is one of the reasons why there is always a regulatory consideration about smaller.

The other thing that I would like to point is that a gas tax is I guess if you can allocate fuel by price, and you are going to take the $0.50 a gallon an higher margins might be earned in Martinez away from the oil companies or tack it on to what the oil companies charge.

As a consumer coming to California, I just think that would get two of you with your hands in my pocket, and I don't care which one of you takes it out, but I just assume one of you would. Plus before you get to the fact that starts to affect your ability to have retailers who sell other items who can't sell because the customers are paying the higher tax and all that.

One other point that I would like to make about this is that we talked about waivers, and we agree and disagree at the same time. He agrees there should be a waiver so we can fuel in. Whether you do it strategic reserve, it's done on a waiver. The difference is this. I believe correctly 1999 Chevron applied for a waiver. We had that big old price spike and Chevron applied for a waiver. I was tracking cargos.

There were cargos getting ready to come to California. Chevron came out I believe it was and said we want a waiver. That scared everybody, so the gas didn't come. Chevron was eh, we won't use it. Now the companies that were involved in dropping the ball that created the shortfall controlled the waiver process. You guys gave them that.

Only the person who drops the ball who is making the extra $0.50 has the right to bring the fuel in. And you say oh, but it will be a $0.15 penalty. If my margin goes up $0.50 a gallon on all those millions of barrels of gas, and I am going to still get a $0.35 net profit on this little bit that I bring in. Holy Cow, it is phenomenal. Do the math. The math on their gain from these things I would turn it around. I would say Chevron, you have a problem, you don't get to get it in.

You get no waiver. Everyone else, come one come all. Punish those who drop the ball, don't provide them with financial windfalls or they will continue to drop the ball. That is my economic analysis on a non-economic or noneconomist point of view. It does not provide economic windfalls -- are you going to give them incentives to drop the ball.

MR. BORENSTEIN: I just want to second half of what Tim just said that I think that was a real problem the way it was implemented and the right solution would have been a market-wide waiver. I wouldn't exclude Chevron from it, but I don't think Chevron would be the first to pick it up.

Unfortunately, the way it was used was at the very least quite disturbing and potentially and exercise of market power, that it was essentially a way to deter entry into the market.

I don't know that for a fact, but boy the incentive was there at that time. That was exactly the situation, a very tight market with an inelastic demand. It is when we really could have used that waiver on a market-wide basis.

MR. HAGGQUIST: I'd like to just address Commissioner Pfann's issues. You pointed out Jacky that this morning we seemed to indicate that there's incentive toward market power, and yet no way to test that, and I think one way to test that is to go through "what if" scenarios, realistic what if scenarios.

If I am a trader and you are a marketer, if I am a trader and I am an integrated oil company, I am a trader who is a system trader balancing my system. I am not going outside my system, staying within my system, and my incentive is to do a good job to balance the system. That is what I am supposed to do, just like someone at ISO balances the electricity flow. That is one scenario.

Another scenario is if I'm a trader in the hurly burly move the market style, and Severin's paper, the good things about his paper, was that it draws to attention to the potentiality for a situation to exist where if you plant a real trader into an integrated company who can move the market by virtue of his or her activity out in the market, what if for example I know that my refinery is going to have some problems. I might have to come down with my refinery next month. I know that, but the market does not know that, I know that. So, if that is going to be the case, you know, we might lost 100,000 to 200,000, 300,000 barrels might come out of the system.

What I am going to do is I am going to

go out in the market. I don't want to show myself in the market as a physical buyer because I will spook the market. So, what I will do is either I will work through brokers quietly and collect paper positions, so to speak. I will buy forward paper. I will lock in. Today's price is $1.50 a gallon in the spot wholesale market, I'll get some brokers to buy me next month 50,000 barrels and build up a position at a $1.45 because there is a little backwardation there. So, I have collected 200,000 or 300,000 barrel position, paper position.

Then what happens is the real event occurs that I already knew about. The real event occurs, and I am rewarded on this basis. My incentive, the money I put in my pocket and go home with at the end of the year is based upon my ability to make money on my position.

If that be the case, the physical event occurs, and by golly, how did that happen. We are short, and we have to go out and buy some physical barrels in the market. We had to really show ourselves in the market and buy some real gasoline out there.

When we do that, since the paper

accumulation probably pushed the market up four or five cents, now we come up physically, that sends the signal, wow, it is going, it is going. Company "X" is in, it is going to the moon, it is going up. That's good. I've got my paper position locked in. If I bought it at $1.45, it goes to $1.55, I got 10 cents a gallon on all these barrels on the paper market that I have logged in. It shoots right through there, then the company, my company, goes in and covers their physical position, and the rising tide rises all boats.

You know these prices they scoop it up another 10 cents. That gets printed by OPIS, then this trucks that I put up this simple cartoons, I say if these cartoons or these flow charts that I put up there are not accurate, tear them down. If they are accurate, pay a lot of attention to them, a lot of attention to them. Either they are accurate or they are not accurate.

If they are, then you have a way to test whether there is market power because if I do this as a non-affiliated trader, and I collect my 100,000 to 200,000 barrels of paper position, and I get it wrong, I lose. My company loses.

There's no secondary advantage to my company. If I do it as an embedded trader, I might lose -- no I can't lose. I cannot lose because I have a personal incentive to pay a higher price in the market, pay a little higher to trade that paper up because I bought lower.

What I think would be helpful would be a real workshop, maybe not this time, next time where you go through a bunch of scenarios. This is the way things work. This is the mechanics of it. This is the scheduling, puts some meat on the bones that we saw with the economists presented and find out whether there is any market power exercised in that way. That's all.

MR. HAMILTON: If I could just jump in real quickly. I paid my own way down here. I'll pay his if you hold that meeting, okay. I'll pay his.

MR. HAGGQUIST: One other thing I think -- Drew are you still on the line?

MR. LAUGHLIN: Yeah, I wanted to chime in when you get a chance.

MR. HAGGQUIST: Yeah, you also asked Jacky about short term solutions that are realistic. I think maybe Drew could address those.

MR. LAUGHLIN: There are quite a few points I want to talk about right now, but one of them is what Gregg was alluding to was one of the things that might be a solution is I don't know how many people are familiar with the new FERC affiliate rules that now apply to electricity and gas trading. They came into effect oh about four weeks ago.

I am sitting in Houston right now actually in an office. This has got teeth, this is serious, and every company in this business has now taken and made moves to comply what FERC stops short, and they shouldn't have.

FERC stopped at these only apply to gas and electricity. It is supposed to now be a code of conduct with crude oil, refined products, LPG's, chemicals. It has absolutely no backbone at all. This is something I think you need to explore because by exploring it, either it can be put and implemented in the State of California, even the state legislator might want to look at this. At least it will bring people to the table to talk about it because I am not going to talk about these are abuses, but we have seen that market players in California recently and even today are still controlling assets and not opening up for public.

This is not done in a mean spirited, this is just done for corporate profits, and we are seeing companies that have virtual monopoly positions holding those positions and now allowing outside players to come into this state.

The commissioners know exactly which I am talking about, especially on pipelines right now, and the infrastructure to get into those pipelines. If you can't get into the pipelines from the tanks, you have basically created a back log. You don't need the docks for the tanks, you've got to be able to get into the pipe.

We have continued situations where this has not opened up, but the situation coming up and I believe someone was talking about extreme backwardation about an hour or so ago, and this is really going to hit us in a few months.

The refiners, traders do not want to hold inventory at this level. They still view this price as an aberration, but nobody wants to get caught holding. This is essentially a case of musical chairs, and no one wants to get caught.

What this is doing is this is driving inventory prices down lower -- excuse me, inventory is down lower, and believe me, it is more vulnerable for more volatility because nobody wants to be caught with these inventories. So, what you are seeing is traders, shippers, blenders, the whole industry is cutting their inventories at these high levels not wanting to get burned if these prices come off.

This is going to cause -- I was asked a couple of weeks ago why the price isn't $3.00 a gallon, and the reason in California and I believe it is a question of timing. If this $53 hit in February or March where we were coming out of the gasoline or into the gasoline season, we probably would be looking at $3.00 quite easily.

We've got some other problems that are hitting us simultaneously with this. The demand for fuels isn't just for gasoline, but the demand for the same fuels into the chemical market is almost historic.

We are not just seeing this in the United States. This is where the Far East is really becoming an engine driving this entire market right now. They are not just buying gasoline for their cars, they're buying feed stocks for their ethylene plants.

We are seeing exports of high octane components out of the United States, (indiscernible) TX, benzine going to the Far East. We are seeing even today, we are seeing this is a little different, we are seeing diesel exported from the United States going into Europe.

Again, what we are seeing here is this a global market, but we are setting ourselves up again for probably some serious price spikes in the spring. Things are moving very slowly to try and open up this infrastructure out there. In the meantime, I'm not seeing in this last six to eight months we have been talking about this and situations have not fixed themselves.

The permits for new tanks has not come about in the LA Basin. We haven't seen any new tanks being built, and the market can absorb these tanks. This is the one thing I want to stress is this strategic storage, and again, it isn't just the fact of having volume out there. It is more important to have quality volume out there, whether it is a lower RVP, low sulphur TX, or alkylate. This type of material is sort of a force multiplier.

If you have a problem, usually refineries don't just have a problem at all plants at all parts of refineries are down, only pieces of the plants usually shut down. But then they have problems making specifications, and by having high quality components sitting ready to go, you are able to basically take refineries and continue to operate certain parts of the refineries and be able to at least make some gasoline to go into the markets out there.

As we see in the U.S., we are seeing the California -- this is one of the questions is that the quality of California gasoline, it has been a factor in the past. It is becoming less of a factor as our sulphur levels become very familiar in the U.S. We are getting down to levels of almost California-type levels in the U.S. We will be down to the 30 PPM level within the next year or the year after in the northeast and the Gulf Coast.

As we move to these levels, the quality issue gets to be less and less. One of the problems we are having this refining capacity problem is no longer a California problem. It is a U.S. problem. Now it has even gone past being a U.S. problem. We are surpassing world refining capacity right now. You can produce all the crude you want, you don't have any place to put it.

Even if you do, we have a problem in the mix of crudes. The crude that is coming out is heavy in (indiscernible) sulphur, and what we are seeing in the world refining market is an inability to handle that type of material. We've got a disconnect of what we need in this country as a high quality product coming from an extremely complex refineries that are built on almost specific crude sometimes.

When we lose supply of that specific crude, those refineries have a hard time bringing their production back up to 100 percent. It cost them 3 percent or 4 percent to switch to a different crude oil.

These little problems just become bigger problems as we get into the next couple of years.

COMMISSIONER BOYD: Jeffrey.

DR. WILLIAMS: Might I say something since we've got back to inventories and that is actually something that I have thought about a lot.

It is very important to do a scenario analysis as Greg Haggquist is saying, but there is a danger here because it is one scenario, and I can develop a lot of other ones where (indiscernible) decision to hold a lot of inventories say looks really foolish. By the nature of these things, the decisions that after the fact they are going to look foolish either way.

Let's say right now shouldn't somebody with gasoline stocks release them because the price of gasoline is quite high. If things work a certain scenario in two months, that will look foolish because the price went up a lot. But it would also look pretty foolish if it went down too. So, to be able to say there is a scenario under which it is good to have inventories or something doesn't prove ex ante that is why it is taking into account the probabilities of the certain scenarios. So, it is not sufficient just to come up with a scenario. You have to make a probablistic judgement of that and balance it against other ones.

This is a fundamental problem in judging what is the optimal amount of inventories. I have an instinct. I can't call it anymore than that, that private companies tend to do that better than large bureaucratic governments, but governments get it right sometimes, so I won't preclude that as a possibility.

I think we have to recognize that inventories are an investment too, and all the uncertainties about investments we have been talking about for 30 years apply to inventories but over 30 days, but the effect is very very large and very fast.

A final point on inventories, and we are talking about how the oil companies are perceived and so forth, I wonder what the public will think about private traders who bought gasoline at $0.80 a gallon and now it is $1.60 or something. What did they do to deserve that profit. They didn't even make the stuff.

Many other industries we hear that type of private trader maligned a great deal. I would imagine one reason we have integrated oil companies as much as we do is that their protected from those kind of accusations, and maybe what we have to learn is stop whining about people who make windfall profits.

MR. COVI: Drew, this is Brian, I just want to ask some clarifying questions on what you just said about these new FERC rules I wasn't aware of. You said they apply to oil and to gas.

MR. LAUGHLIN: No, they apply to gas and electricity.

MR. COVI: Gas as a natural gas.

MR. LAUGHLIN: Natural gas and electricity.

MR. COVI: And they don't apply to refined product.

MR. LAUGHLIN: No, they do not. They are a code of conduct with absolutely no teeth at all.

MR. COVI: Oh, I see. Then you talked about doing something similar in California, but do you have a good feel for what proportion of the pipeline --

MR. LAUGHLIN: Just like what Greg was talking about as far as market knowledge. Go ahead.

MR. COVI: What proportions of the pipelines in California come under FERC jurisdiction versus CPUC. Do you have any idea about that?

MR. LAUGHLIN: I don't, but again, what you have to define -- we are finding out in the last couple of months, you have to almost define what for tariff purposes, or are you talking about what our problem is for tie ins. We are finding that FERC has absolutely no power at all when it comes to forcing tie ins on oil pipelines, but they do in gas pipelines.

It is a complex answer to that question.

MR. COVI: It would be the same, wouldn't it if you had tariff jurisdiction, you would have jurisdiction over gathering lines as well?

MR. LAUGHLIN: Not necessarily.

MR. COVI: Okay.

DR. VERLEGER: Brian, point of fact that the oil pipelines originally were under the Interstate Commerce Commission. They were transferred to FERC under a very different set of rules than the natural gas pipelines. FERC then proceeded to approve deregulation of certain parts. For example, I believe the Kinder Morgan pipeline gathering system down in Southern California has been deregulated on the argument that it was competitive.

If it was still under the FERC regulation, the parts that are under the FERC regulations I think tie ins are easier where they have deregulated it, essentially, there is no way to directly force it to happen.

MR. HAMILTON: One of the things that I don't think the states, because there is this limitation with what states can do fully recognize -- we use a lot of terminology like spot and prompt and futures and all that stuff. When I go to look at it, I find it is really interesting because you know to sell crude to a spot market you have to be a crude producer and you can't put it in your lawn mower, so to buy it back you have to be a refiner. So, this looks like daisy chains. Okay?

What I also find to be interesting is that the commodities market whether it is Chicago, and I am sure not an expert at this, but then you also have the New York Merc and we are referencing prices to the New York Merc for all this gasoline that FOB New York Harbor. Who cares, it wasn't coming here, it didn't have anything to do with supply and demand. It didn't increase your drive, it didn't short it, but all the sudden we are referencing things. We are referencing contracts and stuff.

One of the things I believe is that if you went out and try to gather -- went out and bought paper, futures in the New York Merc, and then started playing games with the fuel availability in the New York Harbor by grabbing on to it and say exporting it to Australia, so that your paper would go up in value, it is manipulating the market, it is irregulated commodity trading. You've got yourself a jail time here.

If you were to go out in California and be a refiner and sit back and say, oh, I will take my fuel from Refinery A in Hawaii, send it to New Zealand, and then I will turn around and buy my barrels I need back in San Francisco on the spot and the subsequent increase in price benefits me and all my west coast refineries is not illegal.

Something that deserves an awful lot of attention, and this is why I want to see the meeting you called for, is an understanding of who the players are and how this paper works, and how it functions because it is an interesting phenomena.

MR. HAGGQUIST: The answer to both your point and Jeffrey's point in terms of inventories, which you would have to describe as dynamic inventory, meaning the inventory that is linked directly to Nymex, you know, the gasoline market in California now has drifted in that direction and deals are now done not on fixed prices, but rather on Nymex pegged prices, right?

Okay, you buy Nymex plus "X" today, Nymex plus $0.40, that is your price in your tank. Because of that, you are able to walk into that tank value against the forward market in New York Harbor, so if you have gasoline in tank in LA against Nymex, you've got it hedged, and you can bring a cargo in from the Caribbean or whatever because it is linked to Nymex, just as the jet fuel players do.

This has been happening in jet fuel for years. As the global arbitrage linked to Nymex is a heating oil plus differential for jet fuel coming in to Los Angeles. Not sold on a fixed price, it is sold on what they call a dif. Everything is done on a dif, so inventory, physical inventory is in fact linked to forward curb pricing on a transparent EF exchange for physical type market and it is hedged. That is the reason.

Do you agree with that, Jeff?

DR. WILLIAMS: I agree with that completely, but I might make two observations on what Mr. Hamilton said.

One is that kind of trading has emerged slowly and many other commodities firsted in the grains in the 1890's and a lot of people didn't like it then, and now everybody imagines how could they live without it. I can give many other examples.

It is a slow process in many ways seems more opaque. I am not surprised it is happening in California. I don't think it is necessarily a bad development.

Your other point about it is illegal under the Commodity Exchange Act of 1936 to manipulate commodity markets, such as Nymex is certainly true, and yet there is a lot of other behavior that is awful close to that, that is allowable. That is a puzzle, let's leave it at that.

DR. VERLEGER: Jeff, can I add that Tim's example of buying gasoline in New York and moving it to Australia would not qualify. It is not illegal under the Commodity Exchange Act. It is --

DR. WILLIAMS: Unless you had a position on Nymex, and then it would be.

DR. VERLEGER: The question -- the approval of the contract in Nymex, having just spent a long time as an expert for the Nymex on this, is the first point was approval -- the question is whether you caused the price to go up. That was correct, but you don't approve a contract for delivery as you know unless there is a large number of suppliers into the market.

What we have seen, the one case of real manipulation in the New York Mercantile Exchange was the Mattel Gazelle shaft episode where they took very large long positions and wound up losing a lot of money, several billion dollars. They were poster --

DR. WILLIAMS: Which suggest they weren't very effective at manipulating.

DR. VERLEGER: They were terrible, but because their actions had an affect on the market. The fact of the matter is the reason New York is a good delivery point and why it doesn't work very well in California is there are multiple delivery locations, there are pipelines coming in, there are a large number of refiners producing the specification.

If you go down to the criteria for approving a futures contract, you want a large number of suppliers, you want the commodity to move easily to the market, you want it to be storable, and you want a large number of buyers so that nobody can really take a position like that and cause any manipulation.

My comment to that would be is if somebody were to try that, the price would move -- they probably would be unsuccessful.

DR. WILLIAMS: I agree with that point very much, Phil, I was positing that they had moved it, but I am very skeptical that you can manipulate a major futures exchange, but were you to do that, it is illegal.

DR. VERLEGER: Yeah. That is exactly right, yes. Okay, I'm sorry.

MR. HAMILTON: As a clarification, what I was generally trying to say is that the spot market is not a commodities trading pet. It is not a regulated identity. It is a handful of players reporting to a trade journal what a transaction had occurred that day.

Like with OPIS. These are unregulated sales. The other point is that if you had a futures price tied to the New York Merc, and you were able to go in and buy some available barrels and ship it to Argentina, you can make a lot of money in California today. You can see those things go on as this paper moves and you are able to handle the available supply because it takes very little movement and very small percentage of it to have the spot go, which then turns around and starts delivering either gross rewards or gross disappointments.

DR. VERLEGER: Can I just a point of fact. The spot market has changed recently. There is now what is called MOC trading where all the trading on a series of the major oils now has to go through the computers on plats and only the transactions that are offered over a one window period, Singapore Brent, gas oil in Europe, and all these.

I mean your description of the (indiscernible) reporting system is absolutely right, but what has happened is the reporting services has been trying to change that, and you have the name of the bidder and the buyer and the seller going across. They have created transparency which is what these markets want.

I am sorry for the interjection.

MR. WILLIAMS: I was going to make a point about the scenarios where someone could manipulate the spot market or let's even take a futures market more generally. These are possibilities, I think they are quite unlikely.

In part, the two scenarios that we have heard, somebody out there was pretty stupid not to even think of it as a possibility. The counter party in those trades, and I don't think most oil traders are that stupid, so when they make those paper contracts, they are thinking about the possibility of being squeezed or the cargo goes away.

Which isn't to say that it will never happen, but there is a natural defense mechanism in these markets.

MR. HAMILTON: I just want to tell you there is a difference between a trader and a refiner like Standard Oil in California. They can move barrels without taking any risk.

MR. BORENSTEIN: Let me pick up on that because I think there is a critical distinction between market power and market manipulation. In the electricity business, the FERC didn't understand that to our great detriment, but it is really important.

Market power is a physical market activity of restricting output in order to raise price. Market manipulation on an exchange is a activity of essentially tricking somebody. It is what economists call an asymmetric information problem.

That is, somebody doesn't know what you are doing. So, you manipulate a market by for instance by taking a very long position that people expect you to liquidate and then not liquidating and saying I want delivery.

In fact, SEC has good rules or CFDC, sorry, has good rules about how you are supposed to proceed, and Nymex has rules that if you have such and such a position, you have to unwind it such and such dates in advance, etc. etc.

The FERC took those rules and said, well, there is the manipulation going on in the California market. We will take these rules from the CFDC and apply them here and that will solve the problem. I just want to make clear that was a lack of understanding of the distinction between market manipulation, for which those rules are quite appropriate, and market power which is not tricking anybody. Everybody knew that certain generators had enough capacity that at peak times they could drive the electricity price to the roof. There is no position limit on futures markets that is going to change that.

They simply had the physical ability to drive price. I just want to make it clear that when you think of this futures market and manipulation, that is a very distinct concept for a market power in the product market.

COMMISSIONER BOYD: Greg, I am going to let you go, and then I am going to say we are going to bring the public into this because we told them that at around 3:00, it being 3:15 by my watch, 3:20 by the clock on the wall. So, your comment, and then I will ask for --

MR. HAGGQUIST: Just a last quicky. Jeffrey is talking about the manipulation of the price and somebody not being so stupid to take a position against it. Many times the trader might be bringing in a cargo and pricing -- bringing in jet fuel cargo and he is pricing the cargo against a local index or a gasoline on a floating price. We call it a floating price.

When you have a whole cargo pricing against a floating OPIS price on pipelines, you have reason to make a -- you are -- if you are selling, obviously you want it to go up. If you are buying, obviously you want it to go down. So, this business of selling a small volume in order to price a large volume is very common all around the world in every market, including California gasoline.

COMMISSIONER BOYD: Okay, here come the blue cards. I'll just take them in which they came to me. Joe Sparano, President of WSPA. We have a podium right back there, Joe.

MR. SPARANO: A real live mike, excellent. Just a few things running through my head listening to the conversation over the last five hours. First of all, I would like to compliment the Commission for having a very balanced panel. There were a lot of things I heard that I thought well of, and there were some things that I really didn't like a whole lot. I guess that is a form of balance.

A couple of things that struck my mind before I get into the factual content, and maybe that will sound whimsical or even stupid. Sometimes you get what you wish for. We've been batting the ball around here about what it is wrong with the gasoline market, what is wrong with petroleum markets.

We have had a system in this country that has systematically over the last 30 years eliminated a lot of incentives to build capacity, certainly has made it much more difficult to build capacity of any source for any reason in any place, mostly California.

We don't have a national energy policy. We haven't ever had one that I know of that has been effective. It would be a good thing if we had one because I think it would give us all something to work under and within.

Collaboration here in this case would be a very good thing. The other thing that struck me is that maybe we need to look in the mirror about some of the areas that trouble any of us. We have the right to go forward and do some things that are constructive. I think there has been a great deal of effort in that area made already. I think we ought to be redoubling those efforts and getting at some of the things that would allow action to take place that would create a greater supply of product.

If you don't like fossil fuels, fine. They are going to be around for a while, and they are good and as clean as we can make them, and we will make them cleaner over time. Drew I think referred to the sulphur reductions that are nation wide. That is all a good thing.

I don't think any of us would argue with one another that breathing bad air is smarter than breathing good air. But there has to be a concerted effort to get at the root of the problem, and I think maybe we are nibbling around the edges, and I borrowed that from somebody on that. I think Severin said that earlier. We might be nibbling around the edges, and we need to go to the heart.

I think that more than anything the notion of reducing petroleum demand by 15 percent as a way to get at some of the difficulties that confront all of us here in California is not as productive as it could be. By that, I mean it really does send a tremendous bad signal to those companies that Tim mentioned who he suggested would not invest under any circumstances.

I tell you what, I run companies in this industry, and I have been doing it for 36 years. You give me an opportunity where you want to take away market share where you want to make it more difficult perhaps impossible to create new facilities which do in fact allow you to take advantage of a good market, the notion that people cut production when prices are high. I have been doing this for a long time, and I don't ever remember doing that, not once, not ever, not for any reason.

We have this system where we are looking at taking away a percentage of the product as a means to get healthier. I don't buy it, and I think it really does create a problem if one wants private industry to come in and invest in refineries, in pipelines, and infrastructure related to marine deliveries, what a wonderful opportunity for LNG. We have companies that despite some of the things we've heard have tried very hard to build new capacity, tankage in the Los Angeles and Long Beach Harbors.

There is a company that went to permit tankage. The public reaction to that permitting process has set them back many many months, maybe forever.

Another company would like to produce ultra low sulphur diesel. I perceive that is a good thing. They are hung up in the permit process because local entities have made it very very difficult for the permit to progress. I am not saying there aren't any good reasons, there probably are some good reasons, but the fact of the matter is, there are a lot of hurdles that make it very difficult for people in this industry and in any industry here in California to help us all make progress.

There was a comment that the industry has not invested money. I was in the middle of, and I know there are many companies represented here, spending $7 billion from the early '90's through the last couple of years, $7 billion inside California to make cleaner products, gasoline and diesel, and to make some additional barrels, some capacity. Most of it was to make cleaner products.

I don't care who you are, those are not

minuscule investments. I think we need to keep our eye on the ball there and make sure when we look at investments, we don't run around with the chicken and the egg. You won't invest because you don't want to invest and we don't want to invest because you won't make it easy for us to invest. That is a big circle, and you ought to attack the problem together and create a system that takes into account local needs, local requirements to protect communities, no backsliding.

I think it is doable. I think maybe Greg's idea of getting the shirt sleeves rolled up and sitting down and mapping that out is a hell of a good idea. We can talk about it forever, I think we need to sit down and maybe map out some things and present them to those parties who have the power to take some action whether it is an administrative order or legislative action. Those things can be done.

In discussing the issue of market power, I personally from what I have read of the report and from what I have heard today, I think there are many elements of market power that appear in theoretically one can observe and say maybe it could happen. I've also heard today, and this is me offering my opinion to the group, my observation is that there is a fair amount of evidence from a number of speakers that on a practical level, there has not been market power, that market power is not exercised.

That doesn't make sense for companies to do things like cut production when prices are up. I can tell you when I cut production. I start it as one of those folks that Phil mentioned earlier, somebody who wanted to get ahead and was charged with the responsibility to make more product whenever possible. You cut production when the prices are low in the hope that because you might be over producing you can bring supply and demand back in balance.

Even more important than that, you cut production because when you buy the crude, you lose money. There are about eight products you make from a barrel of crude, three of them make money: gasoline, diesel, jet. Everything else never, except for extremely rare situations, none of the other products ever make more than crude plus overhead: butane, propane, fuel oil, asphalt, intermediates. They all come out of the same barrel.

What is the trick, Tim? The trick is to invest more money so that you can get more and more gasoline diesel and jet out of each barrel of crude, and then you have a shot. It takes a lot of money. In the U.S., $100 billion has been invested in the years from '92 to 2002 in this refining industry.

From my perspective, that is a fair amount of money, and it does belie the notion that people are sitting back and not investing at all.

Let me wrap it up by saying I think this is a good thing to get a group together to examine a situation that we all know is a challenge. We need to have a better balance between supply and demand. I think maybe rolling up the sleeves is a pretty good way to get at it, and I think maybe throwing some questions at this very knowledgeable panel and ask them for their opinions and taking them into account and maybe trying to move an initiative forward that would take into account the recommendations and observations that you have heard here today would be a good thing.

Thank you.

COMMISSIONER BOYD: Thank you, Joe. The next card I have is from Dr. George Bunyard who is here representing the League of Women Voters of Northern California. Go ahead.

MR. BUNYARD: I simple want to congratulate you. I'm working for the League, the Northern California part, who and this is my initial initiation into this discussion. I think this has been excellent. I've learned more than I ever knew that I didn't know. So, thank you.

COMMISSIONER BOYD: I share that feeling. Was there anyone else out there who wanted to say something? Yes, sir. Would you announce yourself and your affiliation, please.

MR. DECOTA: My name is Dennis DeCota. I am the Executive Director of the California Service Station and Automotive Repair Association.

COMMISSIONER BOYD: Dennis, I should have known you from years ago. We have both changed.

MR. DECOTA: Yes. I've been in this business for 42 years. I've changed a lot in those 42 years. The only area I have for expertise in is that of petroleum retailer.

I represent men and women that are hardworking people that have been franchisees and partnered with major oil companies to distribute gasoline throughout the State of California for the last 14 years.

CASSARA, my organization, has been around for a little 30 years and originally helped Mr. Hamilton get going with a little seed money in Washington.

The association is very concerned about the issue of pricing in California and how it affects our small businesses and the consumers that we serve.

We applaud the California Energy Commission and Transportation Committee in its effort to review the market power issues in the energy petroleum industry.

CASSARA pledges its support to your investigation and holds itself out as a resource for you and your consultants to contact for specific information as you expand your probe into the retail market place.

That brings us back to why I am up here. That is basically my expertise is again, as petroleum marketer. I operate as both a franchisee dealer, and I have operated as a unbranded dealer for many years in this state and represented those folks for many years with my association duties.

I absolutely have no ability to negotiate a price of a gallon of gasoline. I have to buy from a single source supplier at the price that supplier demands on that day. No matter what my volume is, no matter how I operate. If I don't, I am in violation of my lease and I could be terminated.

Unbranded dealers also have contracts through middle men called jobbers, and jobbers also have contracts with their franchise locations that require them to buy the product from them. All of this relates basically to there is not much freedom in the ability of a retailer to shop around to buy a gallon of gas. 85 percent of the gasoline in this state is sold through branded retail outlets. Only approximately 15 percent of that gasoline is sold in the unbranded marketplace.

The unbranded market place and rack pricing are wholesale prices at which most franchise dealers cannot purchase at. We purchase at the highest wholesale price called dealer tank wagon price, that is the delivery price that the truck delivers the gas from.

In a market such as San Francisco, which is one of the highest priced markets in the United States and has been for the last seven years, we have found that many of the major oil companies have some pricing as small as given corner. What this relates to is that they can have a company operation on 19th and Tereval in competition with its own brand marketer at 19th and Lincoln, but now they are both company ops, okay. I'm talking back six months ago.

The price differential for those dealers, there is none because you are competing directly with your companies underpricing you 15 to 20 cents. Once you are out of business, they pick up that station and raise the floor of that whole marketing area on 19th Avenue. They raise the price up.

How much of that is manipulation or market power? That is up to you to investigate, but that goes on throughout. If you have taken and purchased your service station today, you most likely had to purchase it with a supply agreement. I am talking about land and improvements become responsible for all the environmental aspects of that business.

You have to purchase that business from your supplier with a long term supply agreement. How sweet it would be in business if I always knew that when I sold something I could count on what that volume was going to be over 10 to 15 years. How could I manipulate a market place if I knew how many contracted gallons I controlled.

Mr. Hamilton is exactly correct. You need to keep your eye on the tail of the dog for awhile and see how prices are manipulated throughout the municipalities versus the rural areas. When you look at the prices in Colton, did you look at the prices at rack out of Sacramento. You didn't, and the reason you didn't is they are not correlation in proximity. But they are because our gas went from Benecia to Southern California to Arizona and our prices here went up $0.10 per gallon, Jeffrey, in that period of time.

You need to look at it in the broad spec. I think you will see how the market is manipulated to a certain degree. Are the oil companies bad? No, they are not. The oil companies are doing what they have to do to take in and show a profit and to last in the world today.

Is it fair, is it reasonable business? I don't think so. I've seen many many of my peers been put out of business and the market consolidated and consumers paying three to four times the price they were ten years ago for product.

Why? Because the lack of choice and the lack of competition has created a spiral in pricing. Since 1998, we've seen a paradigm change in the way the oil companies retail. It is quite dramatic. I mean if you look at the contractual relationship, the amount of rent increases -- we went in '98 and before Shell Texaco merged, we basically were on a competitive basis with one another as branded dealers and got gallon incentives.

In other words, if I would get maybe \$0.03 to \$0.04 a gallon from gallon one to go out and try to raise my volume, to increase my gasoline sales, and in doing so, would lower price to the consumer. This is not done today. Branded rack right now is higher than my branded DTW. It is totally out of whack. The gas prices since the first of the month, since the first of September have increased over \$0.34 a gallon.

What does that constitute to California citizens on a daily basis is the million and a half dollars a day. This is a very very complex issue with a lot of money at stake. A lot of people are hurting very very severely because of this.

Are the oil companies hurting? I don't think so. If you look at the margins on the West Coast and the time frame of the margins since the introduction of CARB gas which became the fodder for the oil companies to take and change their retail structure and the way that they have done business and the way they priced at retail, you will see a constant increase in price. So, there is no fall back from this marketers standpoint. It has only been one way.

That is higher and higher and higher. Rents literally have gone from $3,000 a month in the average service station in this state to well over $12,000 a month since '98. Margins for us have shrunk because the increase in company operations. Thus, the company keeps a lid on the retail street price through their company ops. They are shrinking our margin, they are driving us out of business, there is less and less competition, there is higher and higher gas prices.

This needs to be investigated. We applaud for your time and effort in this, and if we can be of any assistance, please don't hesitate to call. Thank you.

COMMISSIONER BOYD: Thank you, Dennis. Was there anyone else? Okay, then I would like to bring the issue back to this group and see if there is any more comments, questions, dialogue that you want to engage in up here.

Gregg, I know we kept cutting you off. Did you feel like you got your fair share?

MR. HAGGQUIST: Probably (inaudible) --

COMMISSIONER BOYD: Is your mike on?

MR. HAGGQUIST: Is it on now? Yes. If we were to get together with experts in each field like the gentleman we just heard. I'm not expert in that end of the business, your end of the business, but if you get some experts together, the economists for the backdrop and really walk through some cases of -- let's play games. Let's say okay we are the supply department for a major oil company, or we are a trading company, or we are a marketing company. How do we really do things every day.

The Energy Commission will have an actual hands on model of how it really flows. I'm still not happy with the feeling that as much of these presentations that you have heard, Jim, that you really could go out there and really understand the flow and the pressure on the price and how the games -- not games. Games is the wrong road, the dynamics that make the market move. I just simply would repeat that really a nuts and bolts operational meeting would -- maybe invite the supply managers from each major oil company and not only invited, make sure they are here. Just make sure they are here. That kind of thing. You cannot compel that, but --

COMMISSIONER BOYD: Invite them and they will come.

MR. HAGGQUIST: You know, offer them a reward, I don't know.

MR. BORENSTEIN: I just wanted to say one last thing that the Energy Institute has a contract now as I mentioned to do some research on the retail end of the business, and I certainly found Mr. Hamilton's and Mr. DeCota's comments very intriguing, and I hope we can work further as we work on that study.

COMMISSIONER BOYD: Thank you.

MR. HAMILTON: If I have one suggestion for you. Look outside California, and you are going to find your answers. In the State of Washington, we hit $2.30 a gallon this year. We are right with you. Colton CARB gas, Long Beach goes away, go to Seattle, go to Phoenix and watch the price move and how it moves because I believe there is a problem in California. You can't see the forest through the trees, and things blur to you.

You need to understand what drives price and how when the price moves, what goes from there to that guy, from this guy to Dennis, and how it hits me at the street. Because what I think you are all about is the high price at the pump. I don't care about the price at this spot. I don't care about the New York futures. What made the stations on the corner of Spruce and Goose go up? That is what you need to be able to do, and I think if you go down to the bottom and head up, versus at the top going down, which is you are going to find an amazing thing.

Whatever you say, California is the most expensive gas. No, it is not. Hawaii, Alaska, Washington, Portland, and you really need to go look outside California and how those inventory marketing managers work.

COMMISSIONER BOYD: Thank you. Any other comments? I'd like to thank this group for what has proven to be an extremely interesting discussion today, and we probably will follow up on your offers for help and cooperation. I would love to spend all my time on this, but tomorrow it will be natural gas, and the next day will be electricity, and then I will circle back to climate change, and etc. etc.

This is intriguing, and we do want to follow up on it. The sad thing is this is such a tiny little state organization, less than 400 people, but they do work hard, and we will keep them pursuing this issue.

I must confess, that, again, every time we have one of these sessions, be it public session or a visit from anyone of you representing your organizations, we learn a little bit more, and I am beginning to question when I will ever totally understand the issue, but following with Mr. Hamilton there, we will keep trying.

Yeah, we will venture off the island of California and take a look at what other folks are doing.

Commissioner Pfannenstiel, anything you would like to say?

COMMISSIONER PFANNENSTIEL: Just to say thanks to everybody. I learned a lot, and I really appreciate the candor and the real solid base of information you provided. Thank you.

COMMISSIONER BOYD: With that, we stand adjourned, and again, I thank you all.

(Whereupon, at 3:46 p.m., the workshop was adjourned.)

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CERTIFICATE OF REPORTER

I, ALAN MEADE, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 21st day of October, 2004.